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IUP

1987-1988 Catalog

This bulletin contains announcements of courses for the academic year 1987-88. IUP reserves the right to repeal, change, or amend the rules, regulations, and courses contained in this bulletin at any time. Tuition and fees are also subject to change.

IUP is committed to providing leadership in taking affirmative action to attain equal educational and employment rights to all persons without regard to race, religion, national origin, ancestry, sex, physical handicap, or affectional or lifestyle preference. This policy is placed in this document in accordance with state and federal laws including Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, and Sections 503 and 504 of the Rehabilitation Act of 1973 as well as federal and state executive orders. This policy extends to disabled veterans and veterans of the Vietnam era. Please direct inquiries concerning equal opportunity and affirmative action to the following administrators:

Management and University Concerns:
Ms. M. Karen Deichert
Interim Director, Human Resources
G-30 Sutton Hall, IUP, Indiana, PA 15705

Faculty Concerns:
Ms. Sharon Brown-McGowan
Assistant to the Provost
204 Sutton Hall, IUP, Indiana, PA 15705

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Ms. Linda Hall
Assistant Vice President for Student Affairs
215-A Sutton Hall, IUP, Indiana, PA 15705

Cover photograph by James Collins.

Indiana University of Pennsylvania Bulletin

1987-88 Undergraduate Catalog

IUP
INDIANA, PENNSYLVANIA 15705

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University Calendar

FALL SEMESTER 1987

Registration	Aug 31
Classes begin	Sept 1
Labor Day, no classes	Sept 7
Thanksgiving recess begins at close of night classes	Nov 24
Classes resume (8:00 a.m.)	Nov 30
Final exams	Dec 14-19

SPRING SEMESTER 1988

Registration	Jan 18
Classes start	Jan 19
Spring vacation starts/p.m.	Mar 5
Classes resume (8:00 a.m.)	Mar 14
Easter	Apr 3
No classes	Apr 4
Monday classes held	Apr 5
Reading Day	May 4
Final exams	May 5-12
Commencement	May 14

SUMMER SESSIONS 1988

(tentative)

Pre-session registration	May 30
Pre-session classes (p.m.)	May 30
Pre-session ends	June 17
Main session registration	June 20
Main session classes	June 21
Holiday	July 4
Main session ends	July 29
Post-session registration	Aug 1
Post-session classes (p.m.)	Aug 1
Post-session ends	Aug 19

The University

A UNIVERSITY EDUCATION

As an institution of higher learning, IUP is a community of scholars of both faculty and students, committed to discover, preserve, and impart truth in all its forms. Our primary concern is with the intellectual, moral, cultural, physical, social, and aesthetic development and maturation of its students. To this end we are charged with providing a liberal education of both general and specialized studies which will allow our students to liberate themselves from narrow interests and prejudices, to broaden their intellectual horizons by increased cultural perspective, to develop the ability to think logically, critically, and creatively, and to communicate their judgments clearly and forcefully. The curriculum involves a body of knowledge about the universe and about people, their nature, behavior, and values. It also provides an opportunity to gain specialized knowledge as a preparation for graduate study and entry into professional life. Beyond this breadth and depth of knowledge, the university recognizes that such an education is only a beginning and hopes to stimulate its students to pursue continuous development in the areas of human knowledge, to seek wisdom, to challenge the mysteries of life and examine its ultimate meaning, and to become useful members of society by embracing careers which will touch the whole community.

Approved by the University Senate in May, 1979.

HISTORY OF THE UNIVERSITY

IUP has witnessed a history rich in accomplishment. Since 1875, when it served only 225 students in a single building, it has experienced continuous growth, becoming Pennsylvania's fifth largest university. The current enrollment is over 13,000, with students from thirty-six states and over fifty-five countries.

The first building, named John Sutton Hall in honor of the first president of the Board of Trustees, was opened for students on May 17, 1875.

In April, 1920, control and ownership of the school passed to the Commonwealth of Pennsylvania. In May, 1927, by authority of the General Assembly, the State Normal School became a college, with the right to grant degrees. The name was then changed to the State Teachers College at Indiana, Pennsylvania. In 1959, the legislature approved a change of name to Indiana State College; in the 1960s there followed a rapid growth in the liberal arts program.

In December, 1965, Indiana was redesignated Indiana University of Pennsylvania and given the authority to expand its curriculum and to grant degrees at the master's level. At this time the first doctoral program was initiated.

IUP has been nationally acclaimed as among the academic best. Barron's Guide to the Most Prestigious Colleges, Fourth Edition, 1986, listed IUP among the 283 most academically competitive colleges and universities in the nation. In 1982, the consumer magazine Changing Times identified IUP as one of only fifty U.S. colleges and universities with high academic standards but tuition and fees below the national average. In 1985, the education editor of the New York Times included IUP as one of 221 "Best Buy" colleges and universities in the nation in The Best Buys in College Education. Only twelve Pennsylvania schools were chosen. IUP's internship program is the largest in Pennsylvania.

ACCREDITATION

IUP is a state-owned and state-controlled institution for higher education. It is an approved and fully accredited member of the Middle States Association of Colleges and Schools, the National Council of Accreditation of Teacher Education, the American Home Economics Association, the American Chemical Society, the National League for Nursing, the American Society of Safety Engineers, the Committee on Allied Health Education and Accreditation, the National Association of Schools of Music, the National Association of School Psychologists, and the National Accrediting Agency for Clinical Sciences.

BUILDINGS AND GROUNDS

The main campus, originally consisting of twelve acres and one building, is now composed of a total of 162 acres on which are located sixty major buildings owned by the state and seven athletic fields. The University Lodge, located a few miles from Indiana and surrounded by 280 acres of wooded hillside, offers opportunity for nature study and such recreational activities as hiking and skiing.

THE CENTER FOR COMMUNITY AFFAIRS

The Center for Community Affairs was established in 1976 to meet community needs through the use of IUP resources and technical services. The center is organizationally located in the Institute for Applied Research and Policy Studies of the Graduate School.

The purpose of the center is to forge a strong link between community planning and problem-solving efforts and the analytical capabilities of the university. The center serves officials and agencies through training, technical assistance, applied research, and computerized information systems.

The staff of the center includes two full-time members, eight graduate and undergraduate students, and ten faculty associates.

INFORMATION SYSTEMS AND COMMUNICATIONS CENTER

The Information Systems and Communications Center, established in 1963, is located on the ground floor of Stright Hall. The center provides computational support for undergraduate and graduate courses, faculty and student research, and the administrative requirements of the university. The computing capacity of the center is provided by a large-scale disk-oriented central processor which supports both time-sharing and batch processing services for the university community. Computer terminals, located both in the center and in various departments on campus, permit the use of the computer on a time-sharing basis.

Aid in use of the computer and facilities may be obtained from user assistants on duty at the center and from the center's professional staff.

The center plays an active part in the daily functioning of the university. It is the principal laboratory facility for computer-oriented courses and is used as a teaching aid in many classes involving statistical and numerical analyses and computer simulations.

LIBRARY AND MEDIA SERVICES

Patrick J. Stapleton, Jr., Library, the central library for IUP, was completed and dedicated in 1981. It adjoins Rhodes R. Stabley library, which results in a combined structure of 156,000 square feet. The Cogswell Music Library, the University School Library, and the branch campus libraries at Armstrong Center in Kittanning and in Punxsutawney are the other components of the IUP library system. Twenty library faculty, 27 support and technical staff, and over 160 students are employed in the libraries and Media Resources Division of the university. The book collection contains in excess of 570,000 volumes; there are 4,285 periodical subscriptions, 1.7 million items of microforms, 79,000 bound periodicals, and in excess of 24,000 volumes of governmental publications. (IUP is a designated Select Depository for federal and state publications.) The libraries' media holdings in all formats are extensive. Resources are supplemented through membership in OCLC for interlibrary loan, the Health Sciences Consortium (North Carolina), the Laurel Highlands Consortium, and associate membership in the Center for Research Libraries. The central library is open 96 hours a week during regular terms. The recently renovated Cogswell Music Library, located on the top floor of Cogswell Hall, contains approximately 6,000 books, 70,000 scores, and 10,000 recordings. Holdings of monumental editions are substantial. Sound recordings circulate only to faculty, but listening stations are available for use by all patrons.

The University School Library's 6,500 volumes support the curriculum of grades K-6 at the University School. The Armstrong County campus library has more than 22,000 volumes, and the recently renovated Punxsutawney library contains more than 13,000 books as well as 150 periodicals and recordings of music, poetry, and drama.

UNIVERSITY SENATE

Purpose

The purpose of the University Senate is to provide a formal means through which the student body, faculty, and administration, working as a unified group, shall share in the governance of the university through the establishment of university policy.

Nothing relating to the organization and administration of the University Senate shall be construed so as to limit the authority of the Council of Trustees or the President of the university with respect to the administration of the university as prescribed by law.

Composition and Elective Procedures

The University Senate shall consist of a number of faculty double the number of departments of the university, an administrative segment one-third the size of the faculty segment, and a student segment one-half the size of the faculty segment. Faculty and administrative members must hold full-time contracts at the time of election or appointment, and students must be full-time and in good standing. "Student" refers to both the undergraduate and graduate student bodies. The student segment shall consist of ten times as many undergraduate students as graduate students, each delegation to be elected by its representative student body. Undergraduate students shall be elected under the auspices of the Student Government Association and graduate students through elections arranged by their comparable body. In both cases, the officiating body shall call for and accept such voluntary nominations for election to the Senate as shall be made to it.

Student members of the University Senate serve on most of the Senate committees.

THE FOUNDATION FOR IUP

The Foundation for IUP is a nonprofit agency established in 1967 to develop and maintain private support for IUP. It is governed by a twenty-four-member Board of Directors. The offices of Executive Director Anthony F. Lenzi '54 and his staff are located on campus in John Sutton Hall.

Funds raised through contributions from alumni, friends, faculty and staff, corporations, and foundations are used to support scholarships, academic and athletic enrichment, departmental programs, and other priority needs of the university. In 1985-86 unrestricted revenue totaled over $500,000, and the foundation's endowment was valued at almost $900,000.

The Branch Campuses

Robert H. Doerr, Director, Armstrong Branch
Norman T. Storm, Director, Punxsutawney Branch

IUP operates two branch campuses, one in Punxsutawney, twenty-eight miles north of the Indiana campus, and one in Kittanning, twenty-eight miles west of the Indiana campus. The first branch campus was established in 1962 in Punxsutawney. The following year the Armstrong campus in Kittanning was opened. Over 200 students are enrolled at the Punxsutawney campus and 550 students at the Armstrong campus.

Both campuses have university faculty members who teach full time at the branch campuses. To meet additional curriculum needs, other faculty from the Indiana campus travel to the branch campuses. The branches provide one to two full years of college work which, if satisfactory, is transferable to the main campus of IUP or to other accredited colleges.

Control of the branch campuses is directly vested with the IUP administration and Council of Trustees. Advisory boards from the respective areas identify local needs. Both branch campuses carry full accreditation as integral parts of the undergraduate programs of IUP. This means that courses offered at the branch campuses are of the same quality as those offered at the Indiana campus.

PROGRAMS OF STUDY

The branch campuses of IUP offer basic general education courses in most majors in the various undergraduate schools of the university. Thus, students may schedule a full program for the freshman and sophomore years by pursuing work that will fulfill these general education requirements. In addition to these required courses, a number of electives are offered in many fields.

In some majors, the student will be able to complete only one year's work at a branch campus instead of the two years which would qualify him/her for junior status; hence, it will be necessary to continue studies at the Indiana campus after the first year. This is true of students majoring in highly specialized fields. In any event, no student accepted at either of the branch campuses is eligible for transfer to the Indiana campus until he/she has completed two semesters and has achieved the necessary grade-point average.

Faculty advisers and administrators at the branch campuses are available to advise students on their instructional programs and the proper time for continuing at the Indiana campus, whether it be after two, three, or four semesters.

BUSINESS ASSOCIATE DEGREE PROGRAM

The two-year Associate of Arts degree in Business is based upon a broad liberal arts program as well as professional competencies needed in the field of business. The program is offered at the Armstrong campus and the Punxsutawney campus. A student accepted for this program may concentrate in accounting or computer and office information systems. Some of the credits earned in the two-year program may apply toward a four-year degree program in business.

CRIMINOLOGY ASSOCIATE DEGREE PROGRAM

This special two-year program in criminology is offered only at the Punxsutawney branch campus and is not offered at the Indiana campus of IUP. When a student is accepted for admission into this, it is understood that he/she will remain in the particular program at the branch campus until it is completed. It is further understood that the student in this special two-year program may not transfer into any other major offered by the university until completion of this program. At that time, the student may apply for admission to a four-year baccalaureate degree program according to the availability of openings on the main campus of IUP. Admission is not guaranteed. If accepted, however, the credits earned in the two-year program will apply toward the four-year degree program in criminology.

ADMISSION

Any prospective student who wishes to attend either of the branch campuses instead of the Indiana campus may apply for admission by requesting an application from the Admissions Office or from the director of either branch campus. The same standards and requirements used for admission at the Indiana campus are applied at both university branch campuses. The mailing addresses for the respective branch campuses follow:

Armstrong County Branch Campus
IUP
Kittanning, PA 16201

Punxsutawney Branch Campus
IUP
Punxsutawney, PA 15767

HOUSING

Both the branch campuses have privately owned residence halls for students living beyond commuting distance. Students are free to choose their housing from all available sources, which include the privately owned residence halls and private homes or apartments in the community. A list of rooms and apartments is available in each campus director's office.

FOOD SERVICE

Each branch campus has its own dining hall within the residence hall. Meals are served seven days a week during the time the university is in session. Residence hall students as well as students living in private homes and apartments may make arrangements to take meals in the dining halls. The dining service is operated by the same food service contractor as on the main campus.

RULES AND REGULATIONS CONCERNING STUDENT BEHAVIOR

Students at the branch campuses are subject to the same rules and regulations as students on the Indiana campus.

FEES

Branch campus students pay the same basic fees as Indiana campus students except for the health fee. The health fee at the Armstrong campus is $30 per semester, while Punxsutawney campus students do not pay a health fee.

CONTINUING EDUCATION

The School of Continuing Education plays a significant role in programming community-university studies classes (noncredit), academic workshops, and institutes in the Punxsutawney and Kittanning areas. The school is also responsive to the needs of the local community through credit and noncredit activities.

Admission and Registration

ADMISSIONS POLICY

Any graduate of an accredited four-year high school or holder of a GED equivalency diploma is qualified to apply for admission to IUP. Prospective students who have completed the third year of high school may file an application beginning the following July 1. Applications filed before completion of the junior year will be returned to the sender.

Requests for application papers and catalogs should be addressed to
The Admissions Office
IUP
Indiana, PA 15705

Admission will be based on college quotas at IUP, taking into consideration restrictions in some curriculums. The Admissions Committee, in reviewing the applications, will take the following into consideration: academic excellence, giving equal opportunity to all students, needs and welfare of the students, high school grades, SAT/ACT scores, achievement tests, guidance counselors' recommendations, faculty recommendations, extracurricular activities, and other pertinent information that would help the Admissions Committee.

Although the university does not require a specific number of high school credits in certain subject matter fields, it does strongly urge all applicants to take the usual college preparatory program in high school. Applicants should also take all available work offered in the field in which they plan to major.

Applicants are expected to name their major field upon application, but a change in major can be made during the freshman year without loss of credit. A change of major after the freshman year (restricted areas are excluded) usually entails a loss of credit and results in a program of more than four years to satisfy graduation requirements.

Applicants to the departments of Art and Music will be admitted to the university by the Admissions Office, subject to the acceptance by the Department of Art after the portfolio review and by the Department of Music after the audition. It is the responsibility of the student to contact the department chairperson and make the necessary arrangements.

APPLICATION FEE

A CHECK or MONEY ORDER (cash will not be accepted) for $15, payable to Indiana University of Pennsylvania, must accompany each application. This fee is nonrefundable and will be used to meet the cost of filing and processing applications.

The application form, the $15 application fee, and the official high school transcript must be mailed to the Accounts Receivable Office, IUP, Indiana, PA 15705.

FRESHMAN APPLICANTS

The Scholastic Aptitude Test

All persons expecting to apply for admission as freshmen should plan to take the Scholastic Aptitude Test ("College Boards") on or before the December test date of the senior year of high school. The Admissions Committee recommends that the applicant first take the test in the spring of the junior year, because the application, if complete, may receive early consideration in the fall of the senior year. If the applicant has an excellent high school record and high College Board scores, the application for admission may be approved by November 30 of the senior year.

Whether or not the applicant takes the College Boards in the junior year, it is recommended that the College Boards also be taken no later than the December testing date of the senior year. The Admissions Committee gives the applicant the benefit of the highest total board scores from all test dates. It is, therefore, in many instances, to the applicant's advantage to take the boards in the senior year. However, the committee will use the boards completed in the junior year if the senior boards are not available at the time admissions decisions are being made.

The applicant should arrange to take the College Boards through the high school principal or guidance counselor or by writing to the College Entrance Examination Board, Box 592, Princeton, NJ 08540, for an information pamphlet and test application. IUP will accept the test battery of the American College Testing Program (ACT) in lieu of College Boards (SAT).

When the applicant receives the information and test application, he/she should fill out the test application and designate IUP as one of the schools he/she desires to receive a copy of the test scores. The test application is to be returned to the Princeton, New Jersey, address.

The Admission Application

Applications for admission will be available after June 1 following the student's junior year of high school.

The applicant may fill out and submit the application and accompanying forms to the guidance counselor after July 1 of the summer following completion of the junior year. The deadline for applications for early consideration is October 15.

The application deadline depends on the number of available vacancies in the freshman class and the number of applications received. Students are encouraged to submit an application and the required supportive information by December 31. Students who have an outstanding high school record and apply to the main campus after December 31, therefore, may run the risk of not being awarded admission to the Indiana campus fall program. Deadlines for the branch campuses vary from year to year, depending on the number of applications received and the academic quality of the students who apply. The university reserves the right to close admissions when it feels that it has offered a sufficient number of acceptances to academically qualified students.

The applicant should give the completed application form and the $15 application fee to his/her high school principal or guidance counselor for completion of the high school record portion of the application. The principal or counselor must then mail the complete packet of admissions materials to the Accounts Receivable Office, IUP, Indiana, PA 15705.

The student's application is complete when the Admissions Committee receives the junior College Board and/or senior College Board or ACT test results, the high school record, the completed application form, and the application fee. In some cases the committee may request additional information, such as a list of senior year subjects or a senior grade report.

This university uses the Social Security Number (SSN) as the basis for all student recordkeeping. Although disclosure of the SSN is not mandatory, its use will facilitate the coordination of national test results, financial aid awards, and the maintenance of accurate records. The SSN will be used solely for identification and/or record keeping purposes.

Processing the Application

(1) The Admissions Committee reviews, with care and understanding, each of the several thousand applications that are submitted each year.

(2) Those persons who, in the committee's judgment, satisfy the standards for early decision will receive notification by November 30 of their senior year. Decisions on most applications are deferred until later in the year. Final action on a completed application takes from eight to sixteen weeks, depending on the number of applications that must be processed. This delay is necessary if each application is to be examined carefully. Applicants who are not given early decision can expect a decision by January 31 of their senior year.

(3) The applicant who is admitted to an entering class is required to visit the campus on an appointed date to discuss his/her academic and career plans with the college dean and other advisers. The date of this appointment for the orientation interview accompanies the notice of acceptance.

(4) A medical examination is required of every applicant after the student is admitted.

(5) Attendance at the orientation interview and payment of the $20 orientation fee signifies the applicant's interest but NOT commitment to attend IUP.

(6) Around April 15, a $100 advance payment is required of all incoming freshmen. This advance payment will be credited to the applicant's housing charges and basic fees. Fifty percent of the $100 is refundable if the applicant cancels admission before July 1. Exceptions to the refund policy may be made by application to the Admissions Committee in cases of unusual circumstances.

EARLY ADMISSIONS PROGRAM

The Early Admissions Program permits students to enroll as college freshmen after completing the junior year in high school. Student applications for acceptance must originate with the student's high school guidance counselor and principal. Admission consideration will be given to those applications which contain a statement indicating explicit approval by the high school principal. The applicant must rank in approximately the top fifth of his/her class and have a combined SAT score of approximately 1050. The university Admissions Committee will exercise the final judgment as to university acceptance after a personal interview with the applicant. The university strongly recommends prior summer school attendance by all students admitted through the Early Admissions Program.

TRANSFER STUDENTS

A student who has been attending another institution of higher education and wishes to transfer to IUP must submit an application and official transcripts of all postsecondary educational work. Transfer students are not required to submit their high school transcript or SAT/ACT scores.

Applications will be accepted for consideration for the fall and spring semesters after July 1 of the preceding year. The application deadline depends on the number of available vacancies in the transfer program and the number of applications received. Students are encouraged to submit an application, $15 application fee, and the required supportive information by February 1 for the fall semester and November 1 for the spring semester. Students who have an outstanding college academic record but who apply after the above designated dates risk not being awarded admission to the university because of space limitations.

A nonrefundable orientation fee of $20 is required of all accepted students. Attendance at a Transfer Orientation Day in July is highly recommended. If a waiver of attendance at summer orientation is approved by the Admissions Office, the student will schedule courses as available in late registration the day before the start of classes.

The evaluation of credits from other institutions of higher education is the responsibility of the Admissions Office and the academic college dean who has jurisdiction over the student's desired major. Normally, courses considered for transfer are only those taken from institutions which are accredited by the six regional accrediting agencies. Each course is usually evaluated separately. The evaluation normally includes a review of the description, semester hours, and grade of each course along with the applicability of the course to the student's major at IUP. However, only credits transfer, not grade-point average. It has been the policy of the university that only courses with a "C" or higher grade will be accepted, except for two-year associate degree graduates of state-supported community colleges in Pennsylvania. No matter how many credits are transferable, the student must satisfy all of the degree requirements falling into the categories of (1) university requirements, (2) college requirements, and (3) department requirements.

University requirements: Since all students are obliged to fulfill a basic program in General Education consisting of fifty-two semester credit hours and there is a reasonable degree of flexibility in the General Education requirements, the Admissions Office and the college deans will look to this area first for applicable credits for transfer. Most introductory courses are generally equivalent.

Residency requirements: The university requires that the last thirty credits in a student's curriculum must be earned by enrollment in courses at IUP. It should also be noted that for community college graduates, a maximum of sixty credit hours are transferable to this institution for the purpose of fulfilling a specific program of study. Excess credits, if any, may be transferred but cannot be used for fulfilling the minimum requirements for the degree.

Transfer students, to remain in good academic standing, must meet the same quality-point average requirements as those specified for all other undergraduate students. See section entitled "Criteria Governing Continuance at IUP."

The university accepts "D" grades only when they are part of a completed Associate Degree earned at a publicly owned community college in Pennsylvania. These "D" grades will be treated in the same manner as those earned at IUP. This articulation policy was adopted by the Board of State College and University Directors in 1973.

PART-TIME STUDY (Non-degree)

Part-time undergraduate study is available through the School of Continuing Education to any high school graduate, holder of a GED Equivalency Diploma, or adult over twenty-five years of age. No SAT scores are required. Note: A TOEFL Score is required as part of the application for an individual whose native language is other than English.

Applications are available from the Part-time Studies Program and must be submitted with documentation directly to the School of Continuing Education by August 15 for the fall semester and December 15 for the spring semester. A $15 application fee is required. Applications submitted after established dates are not guaranteed consideration.

Transfer students may also apply to the School of Continuing Education for part-time study and must submit official transcripts for all previous college work attempted. An overall 2.0 GPA is required.

A student in the Part-time Studies Program is limited to a semester enrollment of no more than 11 credits and must apply for formal admission to a degree program before 30 IUP credits have been earned. Specific requirements for grade point average and IUP credit vary by degree program. The minimum credit criteria to apply for consideration for degree candidacy is as follows:

High School Diploma or GED	15 IUP Credits	2.0 GPA
Veteran (DD-214 required)	9 IUP Credits	2.0 GPA
Transfer (with 12 or more credits)	9 IUP Credits	2.0 GPA
Transfer (with 11 or less credits)	15 IUP Credits	2.0 GPA

Note: A student who has applied and has been admitted by the Office of Admissions to a branch campus is not eligible to apply to the School of Continuing Education.

POST-BACCALAUREATE STUDY (Undergraduate)

Applications are available for the Post-baccalaureate Study Program for the School of Continuing Education. Application and official transcript must be submitted by August 15 for fall semester and December 15 for spring semester. Applications submitted after established dates are not guaranteed consideration. A $15 application fee is required. The fee is waived for graduates of IUP.

Teacher Certification

A student with an earned baccalaureate degree who wishes to complete the requirements for Instructional Level I Certificate must submit an application and official transcripts indicating degree(s) awarded. As a prerequisite to student teaching, a student must be enrolled for one semester. To earn an Instructional Level I Certificate, the student must successfully complete the Pennsylvania Teacher Certification Test.

Second Baccalaureate Degree

A student with an earned baccalaureate degree who wishes to complete the requirements for a second or subsequent bachelor's degree must submit an application and official transcripts indicating degree(s) awarded. The student must complete a minimum of 30 additional IUP credits and meet the requirements for graduation established by the department and college in which the new degree is to be earned.

Program for High School Juniors

Honor students who have completed the junior year of high school with at least a B average in all college entrance subjects taken in the sophomore and junior years may preview university life and earn regular college credit by enrolling in two or three lower division courses. Students seeking admission to this program should write to the School of Continuing Education for further details.

READMISSION POLICY FOR STUDENTS WHO WITHDRAW FROM THE UNIVERSITY VOLUNTARILY

A student who withdrew from the university on a voluntary basis for reasons of health, financial difficulty, etc., and who wishes to reenter must notify, in writing, the dean of the college in which the student was enrolled at the time of his/her withdrawal before April 1, if requesting readmission for that year's summer sessions, or before July 1 for the fall semester (starting in September). Written requests must be made to the above-mentioned offices before November 1 if requesting readmission for the spring semester starting in January.

THE SUMMER SESSIONS

The summer school program at IUP is designed to meet the needs of many students. Courses, workshops, and seminars are offered in the liberal arts, in teacher education, and in other fields of study.

Continuing university students, including newly admitted freshmen, who wish to accelerate their program of studies will find both general education and special courses in all fields of study. Students from other colleges and universities may take courses at IUP; however, they are advised to first ensure that their home institution will transfer such credits earned at IUP.

Teachers-in-service will find courses in the summer program to serve a variety of needs. They may enroll to qualify for permanent certification, take refresher courses in their field of specialization, or take courses for the purpose of extending their certification to a new field.

Three sessions, two of three weeks and one of six weeks, are generally offered during the summer. The pre-session opens the first week of June. Main session begins the last week of June and continues into the first week of August. The post-session opens in early August and usually closes a week prior to the end of the month. All courses given in the summer session require the same amount of time and are granted the same credits as if taken during the regular semester.

The SUMMER SESSIONS SCHEDULE, which contains information regarding courses and activities offered during the summer sessions, is usually available after March 1 and can be obtained by contacting the Registrar's Office, Room G5, Sutton Hall (412-357-2217), or the Graduate School, Room 128, Stright Hall (412-357-2222).

AMERICAN LANGUAGE INSTITUTE (ALI)

The American Language Institute offers intensive summer programs in English for international students and visitors from beginning through advanced levels between June and August of each year.

The English for Academic Purposes Program (EAP) is for applicants seeking to prepare themselves for study at any U.S. college or university. Depending on proficiency, enrollment is for nine weeks of intensive study, beginning main session, including twenty-five hours per week of classroom instruction. Students completing this program earn three semester hours of university credit. Students may apply to IUP for conditional admission, pending completion of this program. The ALI also offers two five-week programs: English for Specific Purposes (ESP) for graduate students entering specialized fields and English for International Visitors (EIV) for visiting professionals who seek improvement in English proficiency while experiencing life in the U.S.

For further information about the ALI programs, contact Dr. Dan Tannacito, Director, American Language Institute, 212 Eicher Hall, IUP, Indiana, PA 15705 USA; (412) 357-2402.

Finances

*BASIC FEES (as of March, 1987)

The fees set forth in this section were those in effect in March, 1987. The fee schedule is subject to change; these figures are to be considered simply as an estimate. You may request a current fee schedule by writing to the Admissions Office, IUP, or by phoning (412) 357-2230.

The basic fee for all full-time in-state students is $840 per semester. This fee covers registration and the keeping of student records, use of the library, student welfare, and laboratory facilities. An additional $70 per credit will be charged for credits scheduled in excess of eighteen.

Out-of-state full-time students pay a basic fee of $1,538 per semester. An additional $128 per credit will be charged for credits in excess of eighteen.

The basic fee for part-time in-state undergraduate students is $70 per semester hour. A part-time undergraduate student is one taking eleven or fewer semester hours. See the sections on Admission and Registration and on University Policies for further information concerning part-time students.

The basic fee for part-time out-of-state students is $128 per semester hour.

An in-state student is defined as one who is a bona fide resident of and domiciled within the state of Pennsylvania for a reasonable period, not less than one year, immediately preceding his or her registration for a term or semester in any state-supported college or university in the state of Pennsylvania. A minor will generally be presumed to be a resident of the place of his/her parents' or guardian's domicile.

The establishment of domicile is primarily a matter of continued residence and intention. Generally, Pennsylvania domicile is considered to be established upon the completion of at least twelve months of continuous residence within the state at the time of registration for courses. For special cases, the university has a committee to review individual circumstances.

*The university reserves the right to change its fees without notice.

*OTHER FEES

AUDIT FEE - Full standard fees will be assessed for each course audited, exception being persons on Social Security or equivalent retirement benefit, who will be given remission of basic fees for such classes where space is available.

ADVANCE REGISTRATION FEE - A nonrefundable fee of $20 must be paid by each student accepted for enrollment. This fee will be used to cover the cost incurred by the university on the students' behalf during Freshman Orientation Day on campus and Fall Freshman Orientation. Payment of this fee signifies the student's interest but NOT commitment to attend IUP.

HEALTH FEE - The student health fee of $36 per semester is assessed for each full-time undergraduate or graduate student at the main campus. All students enrolled in summer sessions will be assessed a student health fee according to the following schedule: pre-session - $7; main session - $15; post-session - $7. This fee covers most services provided by the IUP Health Center. Students will be assessed an additional amount, upon use, for certain medications and laboratory tests. In-patient cost for meals in the Health Center will be charged at the usual meal rate per night if the student does not have a valid meal card. No charge for in-patient care at the IUP Health Center will be assessed for students with valid meal cards covering the meals provided. Part-time undergraduate students taking six to eleven credit hours will be assessed an $18 per semester health service fee which will provide limited service. Part-time students have the option of paying the $36 per semester fee, or they may choose the Fee-for-Service schedule available at the IUP Health Center. Students attending the Armstrong campus of IUP will be assessed a health fee of $30 per semester. There is no health fee for students attending the Punxsutawney campus of IUP.

HOUSING FEE - The room fee for students living in university residence halls for the 1987-88 academic year is $611 per semester for a double-occupancy room and $919 per semester for a single-occupancy room. Resident students are required to take meals in university dining halls and can select from either Plan A or Plan B.

MEAL FEE - Meal fees that went into effect May, 1987, are as follows:

Plan A - 20 meals per week (breakfast, lunch, and dinner, Monday through Saturday, brunch and dinner on Sunday)	$533/sem
Plan B - 15 meals per week (breakfast, lunch, and dinner, Monday through Friday)	$480/sem
Plan C - 10 meals per week (lunch and dinner, Monday through Friday)	$384/sem
Plan D - 5 meals per week (lunch only, Monday through Friday)	$189/sem

STUDENT ACTIVITY FEE - An activity fee is collected from all students and administered through the Student Cooperative Association under regulations approved by the Council of Trustees. This fee of $76 per semester covers the cost of student activities in athletics, lectures, entertainment, student publications, etc., and is payable in one sum for the semester. The Student Activity Fee is $28 for part-time students. (These fees are subject to change without notice during the academic year.)

LATE REGISTRATION FEE - Each student registering after the last date officially set for registration is required to pay $10 for each day thereafter to a maximum of $50 (except when permission for late registration has been secured in advance from the president because of illness or other unavoidable causes).

BAD CHECK CHARGE - Students making checks payable to "Indiana University of Pennsylvania" which are not acceptable to the bank for any reason will be charged $5 for each bad check in the amount of $.01 to $9.99 and $10 for bad checks written for $10 or more.

MILITARY SCIENCE FEE - An activity fee of $5 is required for ROTC Cadets to cover the cost of Cadet Corps functions. This fee is payable directly to the military science department.

STUDENTS STUDYING ABROAD - Students enrolled in the studies abroad program will pay a program fee per semester to the university. All other fees assessed by the foreign institution will be paid directly to the foreign institution by the student.

MED-TECH STUDENTS - During the clinical year a fee may be levied and collected by the participating hospital. The only other cost to these students shall be an administrative fee of $150 to be collected by the university. Room and board shall be the responsibility of the student.

MISCELLANEOUS COSTS - In some courses students are required to obtain supplies and materials to complete course projects. In many courses, a student may make a voluntary contribution to a cooperative fund established for the purpose of obtaining these supplies and/or services at a lower cost. Examples are art courses, field trips, etc.

MUSIC - For each Applied Music course, the fee is $50 per semester for a half-hour lesson once a week. This charge is in addition to credit hours costs.

ESTIMATED EXPENSES PER SEMESTER

	In-State	Out-of-State
Instructional Fee	$840.00	$1538.00
Housing	611.00	611.00
Meals	533.00	533.00
Student Activity Fee	76.00	76.00
Health Fee	36.00	36.00
Books and Supplies	200.00	200.00
	$2,296.00	$2,994.00

Miscellaneous and travel expenses would be in addition to the above.

*Cost of books and supplies may vary depending on major and class enrollment.

SUMMER SESSIONS FEES

BASIC FEE - The basic fee for students enrolled for any of the regular summer sessions is $70 per semester hour for undergraduate students.

HOUSING FEE - Room rates for the 1987 summer sessions are
Double occupancy - $39 per week
Single occupancy - $59 per week
Students are charged for each session according to the number of weeks they will require housing. Resident students are required to take meals in university dining halls and can select from Plan A or Plan B.

MEAL FEE - Estimated meal rates for 1987 summer sessions are

Plan A - 20 meals per week	$34 per week
Plan B - 15 meals per week	$30 per week
Plan C - 10 meals per week	$24 per week
Plan D - 5 meals per week	$12 per week

STUDENT ACTIVITY FEE - For the main summer session, this fee is $28 and for the pre- and post-sessions, $12 per session, payable at time of registration.

STUDENT HEALTH FEE - Each undergraduate and graduate student enrolled in IUP summer sessions will be assessed the following fees for Student Health Services: $7 for pre-session, $15 for main session, and $7 for post-session.

SPECIAL FEES

DEGREE FEE - A fee of $20 to cover the costs of a diploma and processing must be paid by each candidate for a degree.

TRANSCRIPT FEES - Applications for transcripts must be made ONLY IN WRITING to the registrar, either by U.S. mail or on forms available at the transcript window in Sutton Hall-Ground Floor. Such requests MUST include

(1) Your full name and Social Security number as of your graduation or termination of enrollment at IUP. (Please note any name changes since graduation);

(2) Your present address;

(3) Whether you are requesting a transcript of your undergraduate and/or graduate work;

(4) Whether you graduated or, if not, when you were enrolled;

(5) The full and clearly stated name(s) and address(es) of person(s) to whom you wish the transcript(s) sent;

(6) The transcript fee is $2 for each copy requested. (Checks or money orders should be made out to Indiana University of Pennsylvania.)

Any requests which are not accompanied by the proper fees or information will be returned to the senders for inclusion of them. No transcript requests will be processed without the payment of transcript fees.

OFFICIAL transcripts (containing signature and university seal) will not be issued to students directly. The university will attempt to mail official transcripts within a reasonable time. However, in the event of its failure to do so, damages will be limited to the fee, if any, paid by the student for the copy or copies of the transcript. In no case is the university responsible for consequential damages.

DAMAGE FEE - Students are responsible for damages, breakage, loss, or delayed return of university property.

BILLING AND PAYMENTS

All bills, including basic fee and housing fee, are payable as specified on the bill for at least the first nine weeks. Checks or money orders, in the exact amount of the account, should be made payable to the account designated on the bill. Book Store purchases are on a cash basis.

It is desired that payments for the entire semester be made in August for the first semester and in December for the second semester; however, the half-payment option may be exercised, if necessary.

Delinquent Accounts

Students will not be permitted to enroll for any semester nor to graduate until all bills previously incurred have been paid; nor will credit be certified to any other institution or the Department of Education until all overdue accounts have been paid. A late payment fee of $10 for each day past the due date will be assessed for delinquent accounts up to a maximum of $50.

Undergraduate students desiring to leave school before the close of a semester must report to the vice president of Student Affairs and to the Accounts Receivable Office to settle all unpaid accounts. Graduate students report to the Graduate School dean.

FINANCIAL DELIQUENCY POLICY - Registration is not in fact complete until a student pays the fee for such registration, and the university reserves for itself the right to bar such a student from classes. When it has been determined during the course of a semester that a student's account has become deliquent from accrued charges, the Registrar's Office will be notified of this delinquency and advised to refrain from reporting the student's grades and from issuance of any transcripts for that student's work until the delinquent account has been satisfied. Faculty members will continue to submit a grade for the financially delinquent student; however, only after the student has cleared his account or established a payment plan satisfactory to the Accounts Receivable Office will requests from and official reports to students be honored by the Registrar's office.

IUP REFUND POLICY

The university must engage its faculty, assign residence hall space, and arrange for meal contracts in advance of each term in accordance with the number of students who expressed their intent to be enrolled. When students withdraw from the university, they create vacancies which cannot be filled, and financial commitments for salaries and services by the university must be honored. The refund policy at IUP applies to all students enrolled in credit-producing programs at the university either full-time or part-time.

Cancellation

Students who have made prepayments to the university, are unable to attend classes, and notify IUP five days prior to the start of classes or earlier are entitled to full refund of all fees paid, LESS APPLICABLE ADVANCED PAYMENT DEPOSITS. To be eligible for such a refund, the student must notify the university treasurer in writing five days prior to the start of classes. The university treasurer will forward to the registrar copies of cancellation notices and the registrar will cancel the student's registration and notify the appropriate university offices. Students who use university residence halls and/or food service the week prior to the start of classes and cancel will forfeit an amount equal to one week's fee for such services plus the full amount of any advance deposit payment.

Total Withdrawal from the University

Students who register for classes and then withdraw from the university on or after the fourth day preceding the start of classes are subject to the following:

A. Undergraduate students withdrawing from the university must process such withdrawal through the Advising and Testing Center, 107 Pratt Hall. Graduate students must withdraw through the Graduate School Office, Stright Hall. The official withdrawal date will be established by the Advising and Testing Center (undergraduate) or the Graduate School Office (graduate).

B. Students totally withdrawing from courses, upon receiving approval from the applicable office (Advising and Testing Center or Graduate School), will forfeit a portion of the semester charges in accordance with the following schedule:

Withdrawal on Calendar Day Basis	Percentage of Student's Total Semester Charges to be Forfeited
4 days prior to the start of classes through 14	20%
15 through 21	30%
22 through 28	40%
29 through 35	50%
36 or beyond	100% (no refund)

The start of calendar days is defined as the first day of classes as scheduled on the university calendar.

Refunds for students receiving financial assistance from scholarships, loans, and/or grants will be returned to the source of aid in accordance with the provisions prescribed by the funding source.

During summer sessions, students totally withdrawing from the university, upon receiving approval from the applicable office (Advising and Testing Center or Graduate School), will forfeit a portion of the total session charges in accordance with the following schedule:

Calendar Day of Withdrawal	Percentage of Student's Total Session Charges to be Forfeited
First class day through fourth calendar day	50%
Fifth calendar day and beyond	100%

The associate provost will determine the official start of classes for each semester or session. Refunds to students enrolled in credit-bearing summer conferences, institutes, workshops, or tours of less than three weeks' duration will be granted a fifty percent refund through the first day of the class (unless a no-refund policy is required by the sponsor).

Individual Course Withdrawal

A student may cancel an individual course(s) up to four days prior to the first day of classes by notifying the registrar in writing. If a student cancels a course(s) prior to the fourth day preceding the start of classes, no penalty will be charged and the student will receive 100 percent refund for the course(s) cancelled. No refunds will be made to full-time students who withdraw from individual courses after the fourth day preceding the first day of classes.

Individual course withdrawal is defined as a reduction in class load but not total withdrawal from the university. Example: a student who registers for three courses and then withdraws from one or two classes but continues with the other class or classes.

Part-time students (undergraduate students who register for less than twelve credits and graduate students who register for less than nine credit hours) will forfeit a portion of the credit-hour fee in accordance with the following schedule:

Calendar Day of Individual Course Withdrawal	Percentage of Student's Instructional Fee to be Forfeited
Fourth day prior to the first class day through 35	50%
36 and beyond	100%

Refunds will be granted only for instructional fee. No refund will be granted to students who drop and add like number of credit hours. Refunds will be granted to students for individual course withdrawals during summer sessions under the same basis as outlined under the heading Total Withdrawal.

Termination of Residence Hall or Dining Service Contract

A. Academic Year (Fall and Spring Semesters)

1. Residence Hall Termination
   Release from a residence hall contract is on a replacement basis except under those conditions outlined in the contract. Students who request in writing and are released from their residence hall contract by the Office of Housing and Residence Life prior to the fourth day preceding the start of classes will be assessed no forfeiture, and the student will receive a 100 percent refund of the residence hall fee, less applicable advance deposits. Students who request in writing to terminate their university residence hall contract on or after the fourth day preceding the first day of classes and are granted a contract release from the Office of Housing and Residence Life will forfeit one week's residence hall rental for each week or portion thereof the student is assigned to a university residence hall. A week's rental charge is determined by dividing the semester's fee by the number of weeks in the semester. The specific date of release will be determined by the Office of Housing and Residence Life.

2. Dining Service Termination
   Students who are released from their dining service contract by the Office of Housing and Residence Life prior to the fourth day preceding the start of classes will be assessed no forfeiture, and the student will receive a 100 percent refund of the dining service fee, less applicable advance deposit. Students who request in writing to terminate their university dining service contract on or after the fourth day preceding the first day of classes and are granted a contract release from the Office of Housing and Residence Life will forfeit a portion of the semester charges in accordance with the following schedule:

Date of Termination From Dining Service Contract	Percentage of Semester Fee to be Forfeited
Fourth day prior to the first class day through 35th calendar day	50%
36th calendar day and beyond	100%

B. Summer Sessions
Once a student signs a contract for housing and/or dining services, he or she must request in writing and obtain a release from that contract from the Office of Housing and Residence Life in order to be eligible for a refund in accordance with the following schedule:

Date of Termination from Residence Halls and/or Dining Service	Percentage of Session Charges to be Forfeited
Check-in date* through fourth calendar day of classes	50%
Fifth calendar day and beyond	100%

*The Office of Housing and Residence Life will publish the date students are to check into the residence halls for each summer session. The check-in date is the effective date of the student's contract.

Other Provisions

No refunds will be granted unless formal withdrawal procedure has been initiated through the Office of Student Personnel Services by the student at the point of withdrawal. Written and dated notice is required by the student or the student's family in special circumstances, such as sickness, within thirty days of the student's withdrawal.

No refunds will be granted by the university to students who are suspended or expelled from classes, residence halls, and/or dining service.

The Office of Student Personnel Services (for undergraduate students) and the Graduate School Office (for graduate students) may request exceptions to these policies to grant prorated refunds when circumstances justify it. Example: death, medical reasons, or military obligation.

The Accounts Receivable Office, Administrative Annex, is responsible for implementing this refund policy. Students who wish to appeal the decision rendered by the Accounts Receivable Office may do so through the university treasurer to the vice president for Finance.

FINANCIAL AID

The Financial Aid Office, located at 308 Pratt Hall, offers financial information and counseling to all students attending IUP. The types of financial assistance offered by the Financial Aid Office include student employment, loans, grants, and scholarships. In most cases, a Pennsylvania State Grant and Federal Student Aid Application is used to determine eligibility for these programs.

Statement of Student's Rights

The Financial Aid Office of IUP is providing the following information in compliance with federal guidelines for the dissemination of financial aid information.

In order to be considered for financial aid administered through the university, a Pennsylvania State Grant and Federal Student Aid Application must be submitted to PHEAA in Harrisburg. Students will be awarded assistance based on demonstrated financial need. In order to be eligible for continued funding, the applicant must remain in satisfactory academic standing at the university and show continued satisfactory progress.

The appeal process regarding financial aid decisions is through the vice president of Student Affairs.

Payment of financial aid awards is done on a semester basis. All financial aid, with the exception of private scholarships, work-study, and the guaranteed student loans, is credited to the student's bill in advance.

The cost of attending IUP and the university's refund policy are listed in this catalog. Please refer to the index for further information.

EMPLOYMENT provides an opportunity for students to earn money to help finance their educational expenses. Students may be employed on campus for up to twenty (20) hours per week. The university encourages students to participate in the on-campus student employment program, since studies have demonstrated that part-time employment provides a positive stimulus to students in their adjustment to campus life and the maintenance of their academic averages. All campus employment is administered by the Financial Aid Office.

LOANS are a form of aid for which repayment must begin upon termination of the student's university education.

GRANTS are funds which carry no obligation for repayment. These funds are awarded to the student on the basis of financial need.

SCHOLARSHIPS are funds which carry no obligation for repayment. They are gifts awarded to the student on the basis of ability.

Federal aid administered through the university is available for both the regular academic year and the summer sessions. The application deadline for upperclassmen for these federal aid programs is normally May 1 for the following academic year. Freshmen may apply for aid upon acceptance to the university. For the summer sessions, the application deadline is also May 1.

A financial aid fact sheet containing specific information about financial aid may be obtained at the Financial Aid Office. In addition, the director and assistant directors of Financial Aid are available for student consultation from 8:00 to 11:45 a.m. and 1:00 to 4:15 p.m., Monday through Friday. The Financial Aid Office recommends that students with questions contact the office at (412) 357-2218.

EMPLOYMENT

Employment programs provide an opportunity for students to earn money to help finance their educational expenses. Students may be employed at minimum wage on campus for up to twenty hours per week when classes are in session and forty hours per week during vacation periods.

The Financial Aid Office, 308 Pratt Hall, posts known available jobs on the glass enclosed bulletin board outside the office. STUDENTS ARE RESPONSIBLE FOR FINDING THEIR OWN JOBS, whether under the Federal College Work-Study (CWSP) Program or University Employment (UE).

COLLEGE WORK-STUDY (CWSP) - The College Work-Study Program is a form of federal aid awarded on the basis of need as measured by the PHEAA/Pell application. A CWSP award is not a guarantee of employment. CWSP is a nonrepayable source of aid that allows students to work and earn money performing on-campus jobs. Money earned from CWSP jobs is to be used to help meet educational costs. Students are eligible to work until they have earned the amount listed on their award letter.

REAL (Relating Experience to Academic Learning) - Students who have internships with off-campus, nonprofit, public service agencies may be eligible to be paid under CWSP during the internship. Students must have applied for aid through a PHEAA/Pell Application and be eligible for CWSP. The REAL application and University Internship Approval form must be submitted to the Office of Professional Laboratory Experiences no later than July 15 for fall, October 15 for spring, and April 1 for summer. For further information, contact the Office of Professional Laboratory Experiences, 104A Stouffer Hall, IUP, Indiana, PA 15705.

UNIVERSITY EMPLOYMENT (UE) - Many students who are not eligible for CWSP find on-campus employment through IUP's University Employment Program. UE does not require an application and is not based on financial need.

ARA FOOD SERVICE EMPLOYMENT - Students interested in working in the dining halls (Folger and Foster), the Foster Hall Coffee Shop, or ARA Catering should inquire about jobs from the managers of these dining facilities.

LOANS

Government-Sponsored Loan Programs

PERKINS LOAN PROGRAM - The application for the Perkins Loan Program is the Pennsylvania State Grant and Federal Student Aid Application. The loan is awarded to students on the basis of financial need. It is interest-free and nonrepayable until six months after termination of education, at which time it becomes repayable at five percent interest with a minimum $30 payment per month and up to ten years to repay.

GUARANTEED STUDENT LOAN PROGRAM - Applications for the Guaranteed Student Loan are obtainable from lending institutions. These include banks, savings and loan associations, credit unions, etc. Through this program, freshmen and sophomores may borrow up to $2625 per year. Juniors and seniors may borrow up to $4000 per year. The loan is interest-free until six months after termination of education and is then repayable directly to the lending institution at eight percent simple interest.

PARENT LOANS FOR UNDERGRADUATE STUDENTS (PLUS) are obtained from lending institutions such as banks and credit unions and administered in conjunction with the federal government. Up to $3,000 per academic level may be borrowed by parents with a total limit of $12,000 for the undergraduate years. Up to $2,500 per academic level may be borrowed by independent students with a total of $10,000 for the undergraduate years. For all borrowers, repayment at twelve percent interest per year starts sixty days after the check is issued. Applications are available at participating lending institutions.

PHEAA-HELP LOANS - To assist students who are ineligible for GSL or who need additional financing to pay educational costs; PHFAA has established the PHEAA- HELP Loan program. A maximum of $10,000 (up to the cost of education) per academic year may be borrowed by qualified students and their parents. The PHEAA-HELP Loan is available to Pennsylvania residents and families of students attending Pennsylvania institutions of higher education. For further information, write or call toll-free - PHEAA, P.O. Box 2165, Harrisburg, PA 17105-2165; 1-800-692-7392.

University-Sponsored Loan Programs

The Financial Aid Office, in conjunction with the Student Cooperative Association, administers the University Loan Fund in behalf of IUP students. Loans are available to assist students who are in financial need and have a financial aid refund coming to them or who have a financial emergency which requires immediate aid. The maximum loan available will be $200 with repayment to be made in sixty days. No interest will be charged for these loans. Loans will be made to meet educational expenses only. Applications for the University Loan and additional information may be obtained at the Financial Aid Office.

The University Loan Fund encompasses the following individual loan accounts:

JENNIE E. ACKERMAN LOAN FUND - The Jennie E. Ackerman Loan Fund was established in 1962 in memory of Jennie E. Ackerman, who served as supervisor of student teachers at IUP for many years.

ROBERT BELLIS LOAN FUND - This loan fund has been established at IUP by friends and relatives of Robert G. Bellis, a graduate of Indiana State College.

MARY EDNA FLEGAL LOAN FUND - A loan fund has been established by Alpha Chapter of Delta Kappa Gamma Society International in memory of Mary Edna Flegal, who graduated from Indiana Normal School in 1899 and served as director of Art. Upperclass students enrolled in the College of Education are eligible to receive these funds.

COLETTE CROMER GERSHMAN LOAN FUND - Family and friends of Colette Cromer Gershman established this fund in memory of Colette Cromer Gershman, a home economics education graduate. Upperclass students enrolled in the College of Human Ecology and Health Sciences are eligible for the loan.

MARGARET FLEGAL HARTE LOAN FUND - The primary purpose of this fund is to aid students who are in temporary need of assistance.

SUZANNE MARSHALL HARTMAN LOAN FUND - A loan fund has been established by family and friends of Suzanne M. Hartman, a home economics graduate of IUP. This loan is granted to deserving students in their sophomore, junior, and senior years.

JOHN HAYS MEMORIAL FUND - This loan fund is in memory of Dr. John Hays of IUP's educational psychology department. Dr. Hays was a faculty member at IUP for twenty-one years.

OLIVER W. HELMRICH MEMORIAL LOAN FUND - The Helmrich Memorial Loan Fund was established by family and friends in memory of Oliver W. Helmrich, an IUP faculty member. Eligibility is limited to seniors and graduate students enrolled in the College of Education.

WILLIAM HENZELMANN MEMORIAL FUND - This loan provides assistance to junior and senior students enrolled in German or Russian in the Department of Foreign Languages. It was established in memory of William J. Henzelmann, a faculty member in German.

MARY ANNE KOLESSAR LOAN FUND - Established in memory of Mary Anne Kolessar, a consumer services student at IUP, the fund aids students majoring in consumer services who are in temporary need of funds.

JANE E. LEONARD MEMORIAL LOAN FUND - The loan honors Jane E. Leonard, a faculty member at Indiana Normal School from 1875 to 1921.

MACK LOAN FUND - Established by the Mack Family, the fund provides assistance to worthy students with financial need.

RUSTY PREISENDEFER MEMORIAL LOAN FUND - This fund was established by Suzanne Preisendefer Brickner in memory of her husband, Lt. Harold A. Preisendefer, who was killed in action in Vietnam.

FLOSSIE WAGNER SANFORD STUDENT LOAN FUND - The Pennsylvania Federation of Women's Clubs established this loan fund in honor of Flossie Wagner Sanford, past president of the club and former member of the faculty.

VARSITY I LOAN FUND - Established by the Men's Varsity Club, this loan is available for use by all IUP students. Preference is given to freshmen.

NORAH ZINK LOAN FUND - The Zink Loan honors Dr. Norah E. Zink, a former geography professor at IUP. Foreign students in their sophomore, junior, or senior year are eligible to receive these funds.

GRANTS

PELL GRANTS (formerly known as BEOG) are available for eligible students. Applications for and information on deadlines for this program are available from the Financial Aid Office or high school counselors. All students are urged to apply for this grant.

PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY GRANTS (PHEAA) are available for both the regular academic year and the summer sessions. Contact the Financial Aid Office to determine the application deadlines for the PHEAA Grant Program.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS (SEOG) are available to eligible students who demonstrate exceptional financial need as determined by the analysis of the Pennsylvania State Grant and Federal Student Aid Application.

SCHOLARSHIPS

The Financial Aid Office administers various scholarship programs in behalf of the university. These scholarships have been established by alumni and friends of the university to recognize outstanding students and assist them in financing their educational expenses. Unless otherwise noted, no application is required for consideration.

AETNA LIFE AND CASUALTY SCHOLARSHIP - A $100 award is presented each semester to a safety management major under this scholarship established by the Aetna Life and Casualty Insurance Company. The award is to be given for academic excellence with strong consideration for women and minority students. Applications should be made to the chairperson, safety sciences department.

AFS SCHOLARSHIP - One full-tuition scholarship will be offered to an AFS student for one year. Letters of application should include a brief description of the student's AFS experience.

ALCOA SCHOLARSHIP - A $1,000 scholarship is awarded each year to a senior majoring in management information systems. The recipient is selected by the MIS faculty.

ARA SCHOLARSHIP - Ten $1,000 scholarships and eleven meal waivers are awarded each year to sophomores who have attained at least a 3.5 grade-point average and who demonstrate need as determined by the Pennsylvania State Grant Application. Meal waivers are awarded to students living on campus; cash scholarships are presented to students living off campus.

J. DONALD BARTOLOMUCCI SCHOLARSHIP - This fund awards scholarships to upperclass students in the College of Business who are deemed worthy by the Scholarship Committee.

BOARD OF GOVERNORS SCHOLARSHIP - Up to twenty-five full-tuition scholarships are awarded each year to academically talented minority students who have scored approximately 1,000 on SATs and who are in the top twenty-five percent of their high school class. The BOG scholarships are renewable for a maximum of eight fall/spring semesters for recipients who maintain a 3.0 cumulative grade-point average.

JEMIMA S. BOYD SCHOLARSHIP - This scholarship was established from the estate of Grace Noble Lacock. Each year, the interest from the account is awarded to female students who intend to teach in schools in Pennsylvania. The scholarships, ranging from $200 to full tuition, are granted to students who will be entering their freshman year at IUP. Eligible applicants will be invited to apply.

BRAMAN MUSIC SCHOLARSHIP FUND - Interest, up to an amount of $100, will be granted as a single scholarship to an eligible prospective freshman music major whose performing area is one of the following: violin, viola, cello, or double bass. Selection of grantee is made by the string area music department faculty and awarded for the second semester. Application and information are available from the music department.

ISRAEL AND BIRDYE BRODY SCHOLARSHIP - Scholarships are awarded each year to juniors who are permanent residents of Indiana County.

M. VASHTI BURR MEMORIAL AWARD - A scholarship is awarded annually to an entering student who is deemed by the faculty to be most deserving, having in mind his or her economic need and the excellence of his or her industry and scholarship. This award is given through the generosity of William V. Whittington. Eligible applicants will be invited to apply.

HOWARD B. BUTERBAUGH SCHOLARSHIP FUND - A gift to the university from Dr. Howard Buterbaugh's estate, the scholarship is to be given to upperclass students based on their academic performance.

CLARK SCHOLARSHIP - The Lt. Alpheus Bell Clark Memorial Scholarship was established by Mr. and Mrs. Steele Clark in memory of their son. Scholarships are awarded each year to young men or women who are seniors in the university, who, in the opinion of a committee chosen by the president, best qualify for the honor in terms of academic ability, leadership, and service to the university, with preference going to veterans or sons or daughters of veterans.

DR. CHARLES L. COOPER ACCOUNTING SCHOLARSHIP - In honor of a retired professor, accounting firms and friends of Dr. Cooper have established a scholarship to be awarded to a senior accounting major. To be eligible, a student must complete ninety credits (at least seventy-five credits completed at IUP) by the end of the preceding spring semester including fifteen credits in accounting and, specifically, intermediate accounting II and cost accounting. Students must have an overall 3.5 average and complete an application that includes a narrative description of their plans for the future. The scholarship will not exceed the amount of tuition, fees, room, and board.

JACK CROSSAN MEMORIAL SCHOLARSHIP FUND - Established by fellow athletes, classmates, and friends, this scholarship shall be awarded at the discretion and good judgment of the head basketball coach to a basketball player of good character and sound academic standing.

ROY A. DAUGHERTY SCHOLARSHIP - Scholarships will be given to worthy first-year students with preference given to sons and daughters of members of Sigma Phi Epsilon fraternity who attended IUP with Mr. Daugherty. Eligible applicants will be invited to apply.

CHARLES DAVIS SCHOLARSHIP - This scholarship is awarded each year to a music major who has shown outstanding ability. The amount of the award will be determined by the funds available from Phi Mu Alpha, the professional music fraternity at IUP.

DISTINGUISHED ACHIEVER SCHOLARSHIPS - The IUP Distinguished Achiever Scholarships were established to honor outstanding students who rank in the top tenth of their high school classes and/or who score at least 1100 on the junior SATs. Consideration is given to school and community leadership, entrepreneurship, music, art, theater, forensics, and other special accomplishments. The scholarships are valued at $1000 per year for four years. Applications and further information are available through the IUP Admissions Office.

THOMAS V. FRAZIER MEMORIAL SCHOLARSHIP - A senior student interested in the theater arts is the recipient of this award. The student may be a drama student or just active in off-stage roles. Financial need will be a consideration, with the chairperson of the theater department and members of the Financial Aid Office selecting the recipient.

GORRELL EDUCATION FUND - Established by the Gorrell family, these scholarships are awarded to music students with exceptional need.

MARGARET FLEGAL HARTE SCHOLARSHIP - Margaret Flegal Harte Scholarships ranging from $200 to full tuition are awarded to top students of each freshman class for the first year. Eligibility is based on academic achievement and financial need. Scholastic achievement is measured by the computation of high school rank and College Entrance Examination Board scores. Financial need is determined through the Pennsylvania State (PHEAA) Grant Application. Eligible applicants will be invited to apply.

ANN MOON HAYWARD SCHOLARSHIP - Scholarships will be awarded to incoming music majors with superior vocal potential for their first year.

WILLIAM HEARD SCHOLARSHIP - Established as a memorial by friends and colleagues of William Heard, formerly a professor at IUP, the William Heard Scholarship is awarded each year to a junior chemistry major for his/her senior year. The recipient is selected by the chemistry department steering committee on the basis of contributions to the department and the university, financial need, academic record, and interview. Applications are available each spring in the chemistry department office.

ISOLDE A. HENNINGER ENDOWMENT FOR ACHIEVEMENT - Friends and family members have established the endowment to provide support for foreign language students and the Critical Language Program. Foreign Language majors who have demonstrated significant improvement in their studies are welcome to apply in the German Department, to Dr. Harold Sommer.

H. EUGENE HULBERT SCHOLARSHIP - The H. Eugene Hulbert Scholarship is awarded to junior music majors each year on the basis of academic excellence and financial need. The recipient is selected by a scholarship committee. Applications are available in the music department office during the second week of classes in the fall.

PATTI HURLEY SCHOLARSHIP - A four-year scholarship of $150 per year is awarded to a female graduate of Indiana Area High School attending the university, based upon academic achievement, participation in school activities, and economic need. This memorial scholarship was established by the family and friends of Patti Hurley, a 1971 graduate of Indiana Area High School who was killed in an automobile accident two weeks after high school graduation.

GLORIA BRYAN JOHNSON MEMORIAL ENDOWMENT - In memory of wife and mother, Gloria Bryan Johnson, Dr. Hugh Johnson and his family have established a memorial scholarship endowment for music students. The Scholarship Committee of the Department of Music will make the yearly selection of the student.

SALLY JOHNSON MEMORIAL SCHOLARSHIP FUND - This scholarship will go to a female junior student, based upon her outstanding athletic abilities. Information and applications are available through the physical education department.

JUNIOR MISS SCHOLARSHIP - A $500 scholarship is awarded to the winner of the Indiana County Junior Miss Pageant if the winner applies and is accepted to IUP on a full-time basis.

DR YU-CHEN LIU MEMORIAL ENDOWMENT - As endowment has been established in Dr. Liu's memory by friends and family. The interest earned on the endowment will be used to sponsor scholarships for Chinese-American students. The Asian Studies Committee will make the selection of the scholarship awardees.

JOEL L. LOGAN MEMORIAL SCHOLARSHIP - This $500 scholarship is awarded each year to a senior male nursing student who demonstrates financial need. Preference is given to a student who exhibits an interest in psychiatric nursing. "Need" is measured by the Pennsylvania State Grant Application. The scholarship is donated by Joan and Homer Logan in memory of their son, a 1977 IUP graduate.

MATHEMATICS CONTEST SCHOLARSHIP - Each year the IUP mathematics department sponsors a contest involving students from area high schools. A $200 scholarship is awarded to the winning school to be used by a student from that school attending IUP as a math major.

VICTOR D. McGUIRE MEMORIAL SCHOLARSHIP - Established by Paula McGuire, students, faculty, and friends to continue Victor D. McGuire's dedication to the criminology profession and students. Awards are made at May graduation to graduating criminology seniors.

McFARLAND SCHOLARSHIPS - McFarland Scholarships are awarded each year to honor upperclassmen who have earned more than forty-five but less than seventy-five credits at IUP, who have grade-point averages of at least 3.80, and who have made special contributions to the university and community. The $500 scholarships are awarded in the spring for use in the fall and spring of the junior year. No application is required.

REGIS McKNIGHT SCHOLARSHIP FUND - The Regis McKnight Scholarship is awarded to male high school graduates excelling in athletics as a tribute to Regis "Peck" McKnight, who for many years was head basketball coach. Selection of recipients will be made by the athletic director and the head basketball coach.

ARVETA DEGAETANO McNAUGHTON SCHOLARSHIP - A scholarship is awarded each year to a graduate of the Business Department of Indiana Area Senior High School who enrolls in the IUP College of Business as a full-time freshman.

ALAN P. MEWHA MEMORIAL FUND - This scholarship is for students in the geography and regional planning department; grant selection will be made by a three-member geography and regional planning scholarship committee. The scholarships are unrestricted as to use or purpose and flexible in the amount awarded and time presented. For further information, contact the geography and regional planning department.

BENJAMIN T. MILLER DRAWING AWARD - To memorialize Benjamin T. Miller, colleagues, students, and friends have established the Drawing Award.

ARTHUR G. MORRELL MEMORIAL SCHOLARSHIP - The Arthur G. Morrell Memorial Scholarship is a cash award given to a mathematics major completing his/her junior year at IUP who best reflects the character and interests of Capt. Arthur G. Morrell, a graduate in mathematics, United States Marine pilot, and IUP football captain. The recipient is selected by the Morrell Scholarship Committee. Students may apply for the award (applications are available at the mathematics department office) or be nominated by a mathematics faculty member.

MORRIS SCHOLARSHIP - The Helen Wood Morris Scholarship was established by Lt. Col. L.M. Morris, in memory of his wife, a graduate of the university. The scholarship is awarded annually to a student selected by a committee named by the university. The student chosen must be in the highest quarter of his/her class, must be in need of financial assistance, and must have demonstrated worthiness in terms of character, personality, leadership, and American citizenship.

MARY MULDOWNEY SCHOLARSHIP - A scholarship in the amount of $100 for any junior or senior student majoring in music with an emphasis on voice, this award is governed in amount and number of scholarships given by the music department.

RUSSEL C. NELSON SCHOLARSHIP - This scholarship is awarded each year to an upperclass music education major deemed worthy by the Music Scholarship Committee. Further information is available in the music department office.

TOM NORMAN SCHOLARSHIP - This award is available to a soccer player in financial need. All disbursements will be controlled by the soccer coach in the amount he or she feels necessary.

ETHYL V. OXLEY, OPAL T. RHODES, AND HELEN C. MERRIMAN SCHOLARSHIPS - Each year the Home Economics Alumni Association honors three former faculty by awarding $200 scholarships. The Opal T. Rhodes Scholarship is awarded to a home economics education major, the Ethyl V. Oxley scholarship to a food and nutrition major, and the Helen C. Merriman scholarship to a consumer services major. Announcements concerning applying for these scholarships are made in the College of Human Ecology and Health Sciences during the fall semester.

MARGARET M. PATTON FOUNDATION SCHOLARSHIP - This scholarship has been established at IUP to assist students attending the university who are worthy and in need of such assistance. Preference will be given to students attending the Armstrong campus.

ALBERT PECHAN SCHOLARSHIP - This is a scholarship for a science major. The amount of the award depends on the money available in the scholarship fund. Selection of a recipient is made by the science department faculty.

LENORA PECHAN SCHOLARSHIP - The Lenora Pechan Scholarship was established by the late Dr. Albert R. Pechan, a former member of the Senate of the Commonwealth of Pennsylvania and of the Board of Trustees of IUP, to provide funds for students who are members of the Reserve Officer Training Corps, who have been outstanding students in the ROTC, and whose other academic work is satisfactory. First priority will be given to students from Armstrong County, selected by the officers of the ROTC and the Faculty Scholarship and Loan Committee.

EVERETT AND LAVINA PETERMAN SCHOLARSHIP - A four-year scholarship is awarded every four years to a business education or management information systems major who has graduated from an Indiana County high school.

EDNA B. PIERCE MEMORIAL FUND - An Indiana High School student, accepted at IUP and enrolled in a teacher education curriculum, will be awarded a one-year scholarship.

WILLIAM E. PIERCE SCHOLARSHIP - This scholarship has been established to award a one-year grant to the junior ROTC cadet having the highest standing in his/her sophomore ROTC class.

PITTSBURGH HOME ECONOMICS TEACHERS SCHOLARSHIP FUND - An award of approximately $500 annually may be given to an undergraduate student majoring in a program in the College of Human Ecology and Health Sciences who graduated from one of the Pittsburgh public schools. Preference is given to students majoring in home economics education and seniors, but the award may be given to a junior or a sophomore student enrolled in any human ecology major who is deserving both scholastically and financially. Eligible students should apply for this scholarship through the dean of the college.

SHELLY G. PORTMAN MEMORIAL SCHOLARSHIP - The Shelly G. Portman Memorial Scholarship, established by her family, will be awarded each year to juniors excelling in concert dance. Selection will be made by the director of concert dance.

WILLIS E. PRATT AWARD - The Savings and Trust Company of Pennsylvania has established an athletic scholarship in the name of Dr. Willis E. Pratt, chancellor emeritus and president of IUP from 1948 to 1968. It will be awarded to athletes chosen on the basis of scholastic and athletic ability and financial need.

FRANK ROSS MEMORIAL SCHOLARSHIP - Frank Ross Memorial Scholarships are awarded each year to upperclass students of ceramics who are deemed worthy by the Scholarship Committee. The awards are presented in memory of a former ceramics faculty member.

DAVID SCHWARTZ MEMORIAL JOURNALISM SCHOLARSHIP - The David Schwartz Memorial Scholarship is established in memory of David Schwartz, a graduate of IUP, by his parents, the Indiana Gazette, the journalism department, and friends at IUP. The scholarship is available to outstanding students majoring in journalism. Contact the journalism department for further information.

ETHEL SEAVEY SIMPSON SCHOLARSHIP - The Ethel Seavey Simpson Scholarships are awarded to academically talented freshmen at IUP who demonstrate financial need. Eligible applicants will be invited to apply.

SAM SMITH FOOTBALL SCHOLARSHIP FUND - The solicited funds are to be used for football scholarships. All the funds are to be distributed as scholarships in accordance with the rules and regulations of the university.

SOIREC, INC., SCHOLARSHIPS - Scholarships for $400 are awarded to graduates of Indiana High School who enroll as full-time students at IUP in the Department of Nursing or College of Business, as participants in intercollegiate athletics, or in the College of Education.

GREGORY SPINELLI MEMORIAL FUND - This fund provides a meaningful award and recognition for students with exceptional promise and commitment to a career in the criminal justice system. An award of $100 will be made annually to a second-semester senior enrolled in the IUP criminology department. Greg Spinelli was an F.B.I. agent killed in the line of duty.

STUDENT ART SCHOLARSHIP - Students of the Department of Art and art education contribute art works to be sold. Funds thus received permit awards of $50 to be made periodically. Applications for these awards are received and screened and awards made by a committee of art students. This award is confined to students of the art department.

SPADAFORA FAMILY ENDOWMENT - Cecil and Ann Spadafora of Indiana and their entire family have established a scholarship to be awarded to one football player each year who has graduated from an Indiana County High School, a Mt. Pleasant High School, or a Bentworth High School. The student will be selected by a committee consisting of the IUP athletic director, head football coach, and a representative of the family. The recipient will be a high school graduate excelling in athletics and a credit to the fund.

MICHAEL J. SUPINKA, JR. MEMORIAL SCHOLARSHIP - Two scholarships are awarded to graduates of Homer-Center High School who have demonstrated academic excellence and leadership qualities and enroll at IUP as full-time freshmen.

MURRAY M. VARNER SCHOLARSHIP - Murray M. Varner was an alumnus and professor at IUP. This scholarship has been established by his friends and family as a fitting memorial to a dynamic educator. The scholarship is awarded each year to an upperclass (at least twenty-seven credits at IUP) student in the College of Business who is a permanent resident of Indiana County. The recipient must be academically stable, personable, enthusiastic, and motivated. Applications are to be submitted to the Financial Aid Office by October 30. Winners will be announced during the fall.

VAUGHAN FOUNDATION SCHOLARSHIPS - Two $500 scholarships are awarded each year. One recipient is selected by Athletics; the other is awarded to a junior or senior business major with above-average grades who demonstrates personal need. A letter of application to Charles B. Stevenson in the College of Business initiates consideration for the second scholarship.

CORRINE MENK WAHR SCHOLARSHIP - Awarded to the top students of each incoming freshman class, this scholarship ranges from $200 to full tuition for the first year without regard to financial need. Scholarship achievement is established by the computation of high school rank and SAT scores. Eligible applicants will be invited to apply.

ZUCCHELLI SCHOLARSHIP FUND - This $100 scholarship will be awarded to a female IUP student majoring in physical education. Information and applications are available through the health and physical education department.

PRIVATE SCHOLARSHIPS - Various service clubs, organizations, churches, schools, and industries offer scholarships to students. High school guidance offices and hometown newspapers are often excellent sources for information concerning private scholarships.

ROTC SCHOLARSHIPS - One-, two-, and three-year scholarships are available to both male and female students who are enrolled in the Reserve Officer Training Corps program. The scholarships pay for tuition, fees, and books, plus $100 per month for ten months per school year. Interested students may obtain applications and criteria information by contacting the ROTC department in Pierce Hall at IUP.

OTHER RESOURCES

ATHLETIC GRANTS-IN-AID - IUP participants in intercollegiate athletics as a Division II institution and awards Athletic Grants-In-Aid in accordance with NCAA rules and regulations. Interested students should contact the Athletic Director, Memorial Field House, IUP, Indiana, PA 15705.

HALL COUNSELORS - Upperclass students and freshmen at the end of their first year may apply to become hall counselors at IUP. Students earn a room and board waiver, as well as a small stipend, by working as hall counselors in IUP residence halls. Application timetables and deadlines are advertised in the PENN and posted in the residence halls and other spots around campus. The application process requires references and individual and group interviews. Hall counselors are selected on the basis of leadership and interpersonal skills and the willingness and ability to perform as role models. Hall counselors must have and maintain a 2.2 quality-point average. For further information, please contact present hall counselors or residence directors or the Office of Housing and Residence Life, G14 Sutton Hall, IUP, Indiana, PA 15705.

SCHOLARS IN EDUCATION AWARD (SEA) - SEA scholarships are available to Pennsylvania residents who intend to teach mathematics or a science in Pennsylvania high schools. Awards are $1,500 per year at IUP and are renewable for those students who meet established renewal criteria. For each year that a student receives an SEA scholarship, he or she agrees to teach in the Pennsylvania public school system. Failure to meet the teaching commitment results in the award becoming a loan that must be repaid at twelve percent interest. High school seniors must have a combined SAT score of 1000 or better (the math score must be at least 550) and a B (3.0) average in science and math and must rank in the top fifth of their high school classes. Applications are available from Pennsylvania high school guidance counselors and must be filed before May 1 of the senior year.

IUP students majoring in mathematics or science education may apply for an SEA scholarship if they have at least a 3.0 grade-point average in their major and at least a 2.5 overall grade-point average. Applications are available from the Office of Professional Laboratory Experiences, 104A Stouffer Hall, IUP, Indiana, PA 15705, and must be filed before May 1 for the next academic year.

VETERANS BENEFITS - In addition to regular sources of financial aid, veterans and dependents of veterans may be eligible for V.A. benefits. For further information, veterans are urged to contact the veterans counselor, 304 Pratt Hall, IUP, Indiana, PA 15705.

VOCATIONAL REHABILITATION ASSISTANCE (BVR) - Students who have physical or learning handicaps may receive educational benefits through the Bureau of Vocational Rehabilitation. In order to be eligible, students must satisfy the physical and financial requirements of the agency. For further information regarding BVR, students should contact their local Bureau of Vocational Rehabilitation Office.

Student Programs and Services

The Student Affairs Division primarily promotes and supports the emotional, social, career, and physical growth of individual students.

ORIENTATION

At the beginning of each semester an orientation program is held for all new students entering the university. The purpose behind this program is to provide new students with academic information, to help them become acquainted with each other, and to help them become familiar with the university and the services it offers. Orientation leaders are selected on a volunteer basis from the student body and are specially trained to conduct all programs.

RESIDENCE LIFE

IUP is a residential campus. Its thirteen residence halls are structured on a geographical basis into four "quads." Each quad is supervised by a full-time student affairs professional with a background in student development and counseling. In addition, each residence hall has a residence director to handle the management functions of the building with responsibilities for programming and staff development. Each building also has undergraduate hall counselors who are responsible for counseling students, planning programs, carrying out administrative tasks, and maintaining a community atmosphere among the approximately thirty students living in their individual section of the residence hall.

Housing available to students includes
- University-owned residence halls
- Fraternity houses
- Private apartments and houses
- Privately owned residence halls

IT IS THE POLICY OF IUP TO OFFER FULL, EQUAL AND NONDISCRIMINATORY ASSISTANCE TO ALL STUDENTS WITHOUT REGARD TO THEIR RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX, ANCESTRY, AFFECTIONAL OR SEXUAL ORIENTATION, OR HANDICAP in both the placement in university housing and in the furnishing of facilities and services in connection with that housing.

Rooms will be available to undergraduate students enrolled at IUP. Each year the university reviews its housing policies and revises them according to its needs for the coming year. The Office of Housing and Residence Life is responsible for all room assignments, dining service, providing information and services related to off-campus housing, and collecting local address and telephone data for the Student Directory. The Office of Housing and Residence Life is located in G14 Sutton Hall, ext. 2696.

University Residence Halls

The Office of Housing and Residence Life at IUP believes valuable learning experiences exist in the residence halls. The specific programs and services provided within the residence halls are aimed at fostering the total development of individuals and student groups. Respect for the learning process as well as respect for self, others, and property are strongly emphasized. Students are encouraged to question and explore increasingly complex intellectual and personal challenges in their efforts to give meaning and direction to their lives. Staff members actively provide support and challenge students as they assume ownership and accept responsibility for their actions and important life decisions. The residence halls represent and reflect the daily challenges of what it is like to live in any community. It is the intention of the Office of Housing and Residence Life to teach students skills which prepare them to be responsible community members so that when they leave the university, they will be contributing and productive citizens in the larger community in which they live.

Because residence hall living is seen as a positive educational experience, freshmen are encouraged to live in residence halls unless they are commuting from home. In an effort to make residence hall living more responsive to individual needs, the university offers two separate living arrangements: single sex and coed. Students are encouraged to consider these options carefully and to select the one in which they would feel most comfortable.

Student accommodations are based on double occupancy. Furnishings include beds, mattresses, mattress covers, desks, chairs, mirrors, and dressers. Students should bring their own blankets, bedspreads, towels, study lamps, and pillows.

All IUP residence halls are equipped with study lounges, recreational equipment, laundry facilities, and locked mailboxes. In addition, computer terminals, self-correcting electric typewriters, and other specialized equipment are located in each quad for student use. Each student has a card key for his/her building which provides entry after the closing hours.

Application for Housing

Incoming freshmen who have been accepted by the Admissions Office as residence students will be billed for a $100 advance deposit in April, one-half of which serves as a housing prepayment. A "Residence Hall Contract for Housing and Dining Service" will accompany that mailing and must be returned to IUP with the deposit payment.

Continuing students may apply for university housing for each year in accordance with the procedure published and posted in January by the Office of Housing and Residence Life.

Readmitted students and those transferring from other universities should contact the Office of Housing and Residence Life directly for housing applications and/or information.

Dining Services

Dining service is available to all students. Students residing in university residence halls are required to take dining services and may choose from two meal plans-Plan A or Plan B. Students residing off campus, in addition to Plans A and B, may also choose Plans C or D. Dining service is contracted each year with the Office of Housing and Residence Life.

Plan A - 20 meals per week
(breakfast, lunch, and dinner Monday through Saturday, brunch and dinner on Sunday)
Plan B - 15 meals per week
(breakfast, lunch, and dinner Monday through Friday)
Plan C - 10 meals per week
(lunch and dinner Monday through Friday)
Plan D - 5 meals per week
(lunch only Monday through Friday)

Students and guests may purchase individual meals in either of the dining halls at the current transient rate. Meals can also be purchased at the Oak Room, an on-campus restaurant, or in the Junction located in Foster Hall.

Insurance for Personal Belongings

Students are encouraged to carry insurance covering the loss or theft of money or property while residing in a residence hall. Students are encouraged to determine coverage available through their parents' homeowners policies and consider a rider if necessary to provide the appropriate coverage while at college.

Student Room Refrigerators

Student room refrigerators are rented on a one- or two-semester basis from the Office of Housing and Residence Life. These refrigerators are UL listed, 2.1 cubic foot refrigerators requiring a maximum of .5 amps. Privately owned refrigerators which meet these specifications may be used in university residence halls.

Student Room Telephone Service

Touch-tone line service is provided for each permanent student room. Students, however, are responsible for providing their own telephone instruments. A touch-tone telephone is strongly recommended in order that students will be able to use expanded services such as the telephone class registration. Rotary or simulated touch-tone telephones will permit standard services only.

Telephone bills are mailed directly to residence hall rooms each month. Toll calls and telegram charges only appear on the bill. Both/all occupants of a room are responsible for all charges made to their Centrex extension. Payment is made directly to Bell Telephone of Pennsylvania.

AUTOMOBILES

Each student, faculty, or staff member who parks an automobile in campus parking areas must register his or her auto each year with the Campus Police. Resident students are not permitted to park on campus without a decal. PARKING RULES AND REGULATIONS MAY BE OBTAINED AT THE CAMPUS POLICE OFFICE, JOHN SUTTON HALL.

COUNSELING AND STUDENT DEVELOPMENT CENTER

Counselors, psychologists, and student development specialists offer services and programs which facilitate the personal and emotional growth of students. Confidential counseling is available on an individual and small-group basis. The opportunity to develop skills for lifelong learning is provided through individual programs, workshops, ongoing groups, and computer-based instructional packages. Career exploration and planning services, new student orientation, women's programs, student satisfaction research, and individualized programs for special populations are provided.

The center is open from 8:00 a.m. through 4:30 p.m., Monday through Friday.

Students may call 357-2621 to arrange for an appointment. After hours, staff may be contacted for emergencies by calling the Health Center at 357-2550.

LEARNING CENTER/ACT 101

The Learning Center provides educational support services for all IUP students in the areas of reading, writing, mathematics, biological and physical sciences, foreign languages, social sciences, study skills, and related areas. These services are provided by both professional and undergraduate paraprofessional staff. Students are encouraged to participate in a broad array of program services including one-to-one and group tutorials, workshops, and formal classes. The main LC office is located in 203 Pratt Hall. Further information can be obtained by calling 357-2729.

The Act 101 program, created as a result of the Pennsylvania Higher Education Equal Opportunity Act 101 in 1971 by the legislature of the commonwealth, focuses on servicing IUP students in order to make the ideal of "equal educational opportunity" a reality for all qualified students. Students matriculating through the LC/Act 101 program are provided assistance in the areas of academic tutoring, career counseling, financial aid information, personal counseling, academic advising related to curriculum concerns, the selection of an appropriate major, and course scheduling. The main Act 101 office is located in 203 Pratt Hall. Further information can be obtained by calling 357-2729.

HEALTH SERVICES

The Pechan Health Center is a well-equipped primary, outpatient health care facility on campus, located at Maple Street and Pratt Drive. The staff includes physicians, certified nurse practitioners and registered nurses. Physician hours are 8 a.m. to 4:30 p.m. weekdays, but students may see a nurse between 7:30 a.m. and 6:00 p.m. weekdays. Saturday hours for routine visits are 9:00 a.m. to 11:30 a.m.

Emergency care is provided from 4:30 p.m. to 11:00 p.m. weekdays and from 8:00 a.m. to 11:00 p.m. on Saturday and Sunday. For students requiring inpatient care, referral is made to the Indiana Hospital. The Health Center phone number is 357-2550.

Completion of the Student Health Form, record of immunizations, and a recent physical examination by the student's family doctor are all required before the student arrives on campus.

HANDICAPPED STUDENT SERVICES

Handicapped Student Services (a unit of the Advising and Testing Center) is the primary agent for the provision of access for physically and learning disabled students at IUP. Students with disabilities are urged to register with the office. Services provided include early registration; assistance in locating accessible housing; equipment loan; test proctoring and reading; NCR paper; liaison with faculty, OVR, and BVS; and general advising and counseling. Further information may be obtained in 107 Pratt Hall or by calling 357-4067.

SPEECH AND HEARING CLINIC

The Speech and Hearing Clinic, located in Davis Hall, offers diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy. The clinic also administers the speech clearance for teacher education programs.

These services are made available without charge to students regularly enrolled at the university to give the necessary assistance to alleviate deficiencies which would interfere with successful performance and progress in the university and in future work. Students are encouraged to use the facilities provided for them and may of their own initiative come to the clinic for help, or they may be referred by any faculty member or university official.

INSURANCE

IUP makes available a student health insurance plan to all students at a very reasonable premium. The plan is optional for students who wish to participate in the program. Full information concerning this insurance coverage is mailed to enrolled students with their billing instructions.

CAREER SERVICES

Career services are available to students who are graduating, students who are enrolled to obtain teacher certification, students who have been accepted as candidates for degrees in the Graduate School, and alumni. Occupational counseling is provided to students of all class levels as well as alumni.

In addition to career counseling, the primary functions of the office are to transmit credentials to prospective employers, arrange for campus interviews, prepare a current file of job opportunities, maintain an extensive library of occupational information, make follow-up studies of the graduates, conduct group counseling and orientation meetings, and provide general assistance in the career planning and job-seeking process.

A credit course (EP304) is available to juniors and seniors in career planning and development.

The Office of Career Services also receives and makes available to graduates and undergraduates information concerning summer employment.

Positions are not guaranteed by the university, but IUP's record of placement is one of the very best in Pennsylvania.

VETERANS

A prospective veteran student should contact the veterans counselor and submit to the counselor the veteran's certificate for Program of Education.

Veterans eligible for the G.I. Bill should report to the office of the veterans counselor in Pratt Hall prior to registration for a semester or for summer sessions to be entered or continued in training for Veterans Administration benefits purposes.

No veteran receiving G.I. benefits may change curriculum without clearance from the veterans counselor. All veterans must maintain normal class progression and report any change in course load to the veterans counselor.

Any undergraduate receiving benefits from the Veterans Administration must carry at least twelve credit hours during a regular semester in order to be considered a full-time student by the Veterans Administration. The minimum full-time requirement for a graduate student is nine credit hours.

VETERANS' CHILDREN - Children of a deceased or disabled veteran whose death or injury was due to service-related causes may be eligible for educational assistance from the federal government under Public Law 634 (Dependents Educational Assistance Act). Immediately upon acceptance to IUP, men and women who qualify for such assistance should contact the veterans counselor to process their application for payment.

GUIDELINES FOR STUDENT CONDUCT

IUP is an academic community within the society at large. As a community, it has formulated a code of standards and expectations which the university considers to be consistent with its purpose as an educational institution. IUP reaffirms the principle of students' freedom coupled with an acceptance of full responsibility for one's behavior and the consequences of such behavior. As a member of the academic community and of the larger society, a student retains the rights, protections, guarantees, and responsibilities which are held by all citizens.

The judicial system of IUP exists to review all alleged academic violations as well as violations of university regulations and/or federal, state, and local ordinances. The primary intent of this educational system is to create a positive behavioral change in the students while also protecting the rights of the members of the university community. The system will hold the student accountable for his/her actions when regulations or statutes have been violated. A complete statement of regulations is available in THE EYE, the student handbook.

POST OFFICE

The University Post Office is located on the ground floor of Folger Hall, at the corner of Pratt Drive and Maple Street. All United States and campus mail is picked up and delivered daily to administrative offices and residence halls from this location. As it is a contract station of the Indiana, Pa., post office, the University Post Office also provides a window service for university personnel for all postal services including box rentals.

STUDENT COOPERATIVE ASSOCIATION

The Student Cooperative Association has played an extremely broad role in the cocurricular life of the university for more than fifty years. All students, faculty, and staff, by virtue of paying the Activity Fee, are members of the association. Virtually all campus-wide activities outside the instructional program are sponsored wholly or in part by the association.

The Activity Fee is the chief source of income for the association's programs. The student's "I-Card" will admit him/her free of charge or at a reduced fee to university social, cultural, and athletic events. Other income for the association comes from the profits of the Co-op Store and income from events sponsored by the association.

The Student Cooperative Association operates the Hadley Union Building, which houses the Co-op Store, and the Co-op Recreational Park. The Hadley Union Building, built by association members through the Activity Fee, offers many facilities for use by the university community.

The Co-op Recreational Park comprises 270 acres of wooded hillsides and fields. Included are a lodge building which will accommodate groups of up to 200 people, a ski facility with two rope tows, toboggan run, cross-country skiing and nature trails, picnic shelter, and garden plots.

COCURRICULAR ACTIVITIES/STUDENT ORGANIZATIONS

As participating members of the IUP community, students occupy a responsible role in governance of the campus. Since a valuable part of education lies in participation in groups where experience in leadership, social and community responsibility, intellectual curiosity, and religious interests can be met, voluntary participation in a number of varied organizations is available and encouraged.

There are currently more than 180 active student organizations at IUP advised by faculty or staff selected by the students. Students are also encouraged to initiate and support new groups which reflect interests not represented by existing organizations.

GOVERNANCE

Student Government Association

The Student Government Association (SGA) at IUP exists to provide the student body with a means to deal with the affairs of students and as a forum for the expression of student views and interests concerning student development within the university.

All SGA Congress members are elected at large. The elections are held twice a year, each involving approximately half the Congress. The terms of office are for one year. The president and the vice-president are elected in the spring, and the other officers are chosen from among the representatives at the first meeting of each new session.

The Student Government Association is active in making recommendations to the administration for the improvement of student welfare, and it is also instrumental in promoting the general welfare of the university and good community relationships. SGA assists in developing and implementing, in conjunction with the university president, policies and procedures by which student organizations may be created and operated. SGA provides an opportunity for discussion of student problems, brings the student body, faculty, and administration closer together through a frank understanding of mutual problems, and promotes the observance of policies that will lead to the improvement of university campus life.

Commonwealth Association of Students

IUP is a member of the Commonwealth Association of Students (CAS), the statewide student voice of the state-owned institutions. CAS promotes and maintains conditions conducive to academic freedom. In addition, CAS insures the individual rights of students as full and equal citizens by actively promoting public, low-cost, quality higher education within the Commonwealth of Pennsylvania for citizens of all income brackets. Through a central office in Harrisburg, the association is set up to serve the special interests of the state colleges and universities through the collection of student opinions and their dissemination to the proper state or federal agencies. It also promotes the passage or defeat of legislation deemed relevant to the students in public higher education in Pennsylvania. CAS also acts as a liaison between students and the state government, the faculty union, or any organization or individual that affects the state universities. At IUP, the CAS local chapter operates independently of the Student Government Association. The local chapter coordinator, student government president, and other qualifying student representatives are each accorded voting privileges at the statewide meetings. Any full-time or part-time undergraduate or graduate at IUP is welcome to join as well as actively participate in the association's activities on the state or local level.

University Senate

Students also are elected to the University Senate and have full voting rights, together with faculty and administrative members. Most of the Senate Committees include students as voting members. Any full-time student may be elected to the Senate. This is the body which shares in the governance of the university through the establishment of university policy.

Residence Hall Association

The Residence Hall Association (RHA) is made up of all students living in university residence halls. The executive body of RHA is composed of elected representatives from each residence hall. The purpose of RHA is to provide educational, social, and community service programs for residents; to collect information on various aspects of residence hall life; and to assist in formulating housing policies and procedures.

ACTIVITIES

Under the supervision of the Office of Student Activities and Organizations and funded for the most part by the Student Cooperative Association, IUP has many activities which are orchestrated by students and which offer entertainment and cultural programs for the entire university community. These activities provide a significant opportunity for students to become more involved with their campus as well as to experience the growth and personal development which involvement provides.

Organizations and activities sponsoring the majority of IUP events include Activities Board, Artists Series, Black Cultural Center, Black Emphasis Committee, Ideas and Issues Series, Summer Activities, and the University Concert Committee. Participation in these and other groups is strongly encouraged.

STUDENT PUBLICATIONS

THE PENN, IUP's campus newspaper, is published three times a week during the fall and spring semesters by students wishing to gain practical newspaper experience. Interested students are advised to attend organizational meetings held in the beginning of each semester.

THE OAK is the university yearbook, a pictorial and written review of the year's activities. Subscriptions may be purchased in the fall or early in the Spring Semester. The *PENN* will carry notices of subscription drives.

Applications for staff positions may be obtained from the Oak office or from the adviser.

IUP REVIEW is a newsletter which is sent to all incoming students prior to their arrival on campus. Contents are geared to areas of concern to new entrants. For more information contact the Admissions Office in Room 216, Pratt Hall.

The *UNIVERSITY DIRECTORY* is distributed early in the fall term to students and faculty. It contains a listing of all properly registered students and of staff, faculty, and university offices.

THE EYE, an IUP student handbook, is distributed annually to all students, free of charge. It includes rules and regulations, the extracurricular program, and general information of interest to students.

ATHLETICS

FRANK CIGNETTI, DIRECTOR; HERM SLEDZIK, ASSOCIATE DIRECTOR

HEAD COACHES: Jerry Hand, Baseball; Tom Beck, Men's Basketball; Jan Kiger, Women's Basketball; Lou Sutton, Men's Cross Country; Ed Fry, Women's Cross Country; Nancy Barthelemy, Fencing; Kofie Montgomery, Field Hockey; Frank Cignetti, Jack Henry (Associate), Football; Don White, Golf; Dan Kendig, Gymnastics; Tom Campisano, Rifle; Vince Celtnieks, Soccer; Kim Johnson, Softball; TBA, Men's and Women's Swimming and Diving; Vince Celtnieks, Men's Tennis; Jackie Albenze, Women's Tennis; Jim Wooding, Men's Track and Field; Ed Fry, Women's Track and Field; Kim Johnson, Women's Volleyball.

The university's men's and women's athletic teams compete at the Division II level of the National Collegiate Athletic Association and in the Pennsylvania State Athletic Conference.

Men's sports offered in the fall include cross country, football, and soccer. The winter sports include basketball, swimming and diving, and rifle. The spring sports are track and field, golf, baseball, and tennis.

Women's fall sports are tennis, cross country, field hockey, and volleyball. In the winter, the sports of basketball, gymnastics, swimming and diving, and coed fencing are offered. Spring sports include softball and track and field.

INTRAMURALS:
ROYDEN P. GROVE, DIRECTOR

A well-organized and varied program of intramural sports and athletic activities is conducted for both men and women and on a coeducational basis.

Intramural handbooks are available from the intramural director, Room 101, Memorial Field House.

RELIGIOUS LIFE

The religious life of students is cared for through the activities of some twelve organizations. Three of these, the Newman Center, the United Campus Ministry, and the Lutheran Center, maintain private facilities near the campus. Others affiliate with and meet in local churches for worship and meetings.

THE ADVISING AND TESTING CENTER

The Advising and Testing Center is available to provide assistance to both students and faculty. Among its functions are running the summer pre-registration testing program; offering a career planning class or computer-assisted career search to undecided majors; co-conducting registration for Summer-January, transfer, January freshman, and Branch campus students; processing total university withdrawals; serving the needs of students with disabilities; and assisting in providing advising information to students and advisers.

The Advising and Testing Center may be contacted at 357-4067 (107 Pratt Hall) for further Information.

Academic Policies

CLASSIFICATION OF STUDENTS

In order to be classified as FULL-TIME, undergraduate students attending any regular academic year semester must be currently enrolled in at least twelve semester hours of credit.

In the IUP summer sessions, a student must be currently enrolled in at least three semester hours during the pre- or post-session and/or six semester hours during the main session in order to be certified as a FULL-TIME enrollee for any one of those scheduled instructional periods.

Full-time certification for students enrolled in instructional periods which do not conform to the regularly scheduled academic sessions will be based upon the number of enrolled semester hours during that period of enrollment (e.g., one semester hour in one week of instruction would equal the minimum full-time certification standard).

For purposes of designating students by class, the following credit-hour classification ranges are used:

Freshmen	28 semester hours or less
Sophomores	29-56 semester hours
Juniors	57-90 semester hours
Seniors	91 semester hours or more

Class designations are based on credits EARNED rather than credits ATTEMPTED.

Persons holding a degree and working for a second baccalaureate degree may be classified as seniors.

NORMAL SEMESTER HOUR LOADS

A normal semester hour load is 15-17 semester hours. A student who wishes to schedule more than 17.5 semester hours must obtain approval from the dean of the college in which he/she is registered; approval will be predicated upon various criteria such as the student's demonstrated competencies, total courses, and specific conditions. The signed approval form must be submitted at registration or drop/add to schedule the credit(s) beyond 17.5. When taking nineteen or more credits, a student is responsible for paying a per-credit fee at the current rate for each credit beyond eighteen.

GRADES AND QUALITY POINTS

GRADING SYSTEM - The following grades are used in reporting the standing of students at the end of each semester or summer term: A, excellent; B, good; C, average; D, passed; F, failed; I, incomplete; R, deferred; P, pass/fail (option). Regarding the option of pass/fail courses, if a student fails the course, he/she will be awarded an F and the terms of "failing" a course will prevail. The grade of R is used to indicate deferred status for certain types of continuing study courses. It must be converted within one calendar year after issuance.

The grade of I is used to record work which, so far as covered, is of PASSING GRADE but is ir complete because of PERSONAL ILLNESS or other UNAVOIDABLE REASON. It must be made up within 180 calendar days after issuance of the grade. The grades of W, WP, and WF are used to designate that the student has voluntarily withdrawn from a course within a specified period after the beginning of any regular semester. The W, WP, and WF grades carry no credits or quality points for the courses in which they are reported but do appear on the student's record.

QUALITY POINTS - Quality points are assigned as follows: Grade A, four quality points per semester hour; B, three quality points per semester hour; C, two quality points per semester hour; D, one quality points per semester hour; and F, no quality points.

Quality points are not counted on grades from other schools, and a student transferring from another school is held responsible for quality points only on work taken in this university.

CUMULATIVE QUALITY-POINT AVERAGE is determined by multiplying the credit hours per course by the grade in quality points received for that course, repeating this procedure for each course attempted, totaling the credit hour quality points thus obtained, and dividing by the total number of credit hours attempted.

COURSE REPEATS - The semester hours for a course repeated after January 1, 1974, shall be counted only ONCE for all attempts; it is this number of hours that will be used in quality-point average (QPA) computation. (In the case where a course is repeated for a different number of hours of credit than when taken initially, the number of hours corresponding to the highest grade will he used in the QPA computations.) It should be noted that the transcript continues to carry the full, unabridged record, with no deletion of repeated courses from the visual record.

The total quality points for all attempts of the repeated course will be the number assigned for the highest grade earned.

The QPA for the repeated course will be determined by dividing the number of quality points by the number of semester hours earned. Only courses with a D or F grade may be repeated and then only with the approval of the student's adviser. Only six repeat attempts may be made subsequent to the adoption of this policy during a baccalaureate degree program.

A course taken at another university will not be applicable to IUP's D/F Repeat Policy, and if credits are transferred they will block repeat of the course at IUP.

To repeat a course in which a grade of 'D' or 'F' was received, a student must file a D/F repeat form prior to repeating a course. The D/F Repeat forms, available in departmental offices, must be filed by the specified deadline by validation in the Scheduling Center, G-8C Sutton.

GRADE REPORTS - Shortly after each semester or summer session, a full grade report is mailed to each student at his or her home address.

PASS-FAIL POLICY

A student may take courses on a pass-fail basis to a total of fifteen semester hours throughout his/her university career. The student is limited to one pass-fail course in any given semester during the sophomore, junior, and senior years. All courses in THE STUDENT'S General Education program and in HIS/HER major and minor fields are excluded from this prerogative.

The student must declare his/her intent to choose pass-fail in a specific course no later than six weeks after the beginning of the semester or the equivalent timespan in a summer session. Instructors will NOT be notified of the identity of pass-fail students in their courses; identification will be handled by the Computer Center through an appropriate coded control.

A student shall be given academic credit WITHOUT QUALITY POINTS for a course taken pass-fail upon receiving a passing mark in the course. The semester hours successfully completed under pass-fail ("passed"), within the overall fifteen semester hour limitation, shall be recorded as counting towards the total semester hours earned for graduation but not towards the semester-hours-attempted data used in calculation of the cumulative quality-point average. However, if a student fails a pass/fail course, he/she will receive the "F" grade and the corresponding quality-point average. An F earned under the pass/fail option may be repeated only under the graded option to provide the quality points to correspond to the "hours attempted" incurred with the F.

The summer sessions, collectively or in any combination, shall be considered a unit similar to a spring or fall semester for pass-fail purposes. Hence, a student is permitted to take only one course during the summer on a pass-fail basis.

The purpose of pass-fail is to permit a student to take an elective course in a field of personal interest where he/she may be competing with major students in the department in which the course is offered. When scheduled, such a course shall be included in the student's normal course load for the semester.

CANCELLED SEMESTER POLICY

This policy shall apply only to students who have attended IUP and have not been enrolled for at least TWO CONSECUTIVE CALENDAR YEARS. Upon application for readmission (or within one year after readmission) the student may request that one particular semester completed before readmission be cancelled from his/her Cumulative Quality-Point Average (C.Q.P.A.). Any semester (full or part time, with the summer sessions altogether counting as one semester) may be cancelled from the C.Q.P.A.; however, all grades received in that semester (good or bad) must be cancelled from the C.Q.P.A. All grades remain on the record, and credit toward graduation for courses passed remains on the record. A student may never cancel more than one semester from his/her C.Q.P.A. under this policy.

AUDIT POLICY

To audit an undergraduate course, a person must be admitted to the university and have met course prerequisites. Students wishing to audit a course for which they registered at registration should obtain a Course Audit Form from the department chairperson of the course. TO AUDIT A COURSE NOT PREVIOUSLY REGISTERED FOR AT REGISTRATION, STUDENTS MUST FIRST PROCESS AN "ADD" FOR THE COURSE BEFORE FILING A COURSE AUDIT FORM. ALL AUDIT PROCESSING, INCLUDING REVOCATION OF PREVIOUSLY REQUESTED AUDIT CLASSIFICATION, MUST BE COMPLETED DURING THE REGULAR DROP/ADD PERIOD. Copies of the completed form are returned to the Scheduling Center, to the department chairperson, and to the student. Audit students have the same privileges as other students in all coursework. There is no limit on the number of courses which may be audited.

All audited courses will be identified as such on the student's grade report and transcript. Work taken on an audit basis will not be graded and will not count toward the fulfillment of requirements for a degree to be awarded by IUP. Since credit hours attempted and quality points will not be awarded for audited courses, they will not affect the student's quality-point average in any way whatsoever.

Auditors will pay normal tuition and such other fees as may be required for the course.

DROP/ADD

All changes to a student's schedule after registration utilize the drop/add procedure. Drop/add takes place at the beginning of each semester and is the procedure which allows students to drop a course without its appearing on their permanent record. A change from one section to another of the same course involves both the drop and add phases. Dates of drop/add are specified for each session. After receiving approval to either drop or add a course section from the department chairperson, the student reports to G-2 Sutton Hall with a copy of his/her original schedule to validate the drop/add form. The student will then present the validated drop/add slips to the course instructor(s). Instructors can make no additions or deletions to class lists without validated drop/add slips. Therefore, a student who attends a class and completes course requirements without processing an 'add' slip will receive no credit. Likewise, a student who does not process a 'drop' slip and does not fulfill course requirements will be issued a failing grade for the course.

INDIVIDUAL COURSE WITHDRAWAL POLICY

During the fall, spring, and summer sessions, students are permitted to withdraw from a course with a grade of "W" up to the midpoint of the course. Faculty are required to inform students of their standing in class prior to the midpoint of the course.

After the close of the prescribed withdrawal period, a student may withdraw from a course only with the approval of his/her adviser, department chairperson, and college dean (in that order), for such reasons as illness, accident, or extreme personal problems. Such withdrawal may occur no later than one week before the beginning of final examinations.

For all discrete course withdrawals, the student must complete a course withdrawal form, available in department offices. This form must be signed by both the student and the instructor.

If a student fails to complete the requirements for a course but has not formally processed a withdrawal as described above, and if the instructor does not receive notice of withdrawal from the university, the instructor shall note in his/her course records the student's last attendance date and/or other student activity and assign an "F" for the course.

WITHDRAWALS FROM THE UNIVERSITY

An undergraduate student who does not register for the succeeding semester or, having registered, does not appear for classes at the beginning of the succeeding semester, is considered to have withdrawn from the university. Thereafter, he/she must apply for readmission as prescribed under "Admission and Registration."

Any undergraduate student who does not register for the succeeding semester or, having registered, does not appear for classes at the beginning of the succeeding semester, is considered to have withdrawn from the university. Thereafter, he/she must apply for readmission as prescribed under "Admission and Registration."

Any undergraduate student withdrawing from the university during a semester or a summer session must secure a Withdrawal Form from the Advising and Testing Center, 107 Pratt Hall (357-4067). The student will clear the form with the appropriate offices listed in the form, securing their signatures as evidence of clearance. (Students seeking medical withdrawal must also provide the Advising and Testing Center with a physician's corroboration of a medical need to withdraw.) The Withdrawal Form will then be returned to the Advising and Testing Center, which will notify the appropriate college dean, campus agencies, and instructors that an official withdrawal has been processed. No person shall be considered withdrawn from the university within a semester or summer session unless such notice is received. Based upon the date of withdrawal, W, WP, WF, or F grades will be assigned to those courses from which the student is withdrawing.

CLASS ATTENDANCE

Class attendance and class participation beyond mere physical presence are essential for maximum educational advantage and are strongly encouraged. Responsibility for all course material rests entirely with the student, whether or not he/she attends each class. Class attendance, per se, shall not be used as a basis for awarding or altering a grade in a course. This applies to freshman through senior class levels. The exceptions to this policy apply to students enrolled in ED 100, EN 100, MA 100, and elementary foreign languages (levels I and II). These students are permitted a maximum of three unexcused absences during the semester. At the discretion of the individual instructor, more than three unexcused absences could result in a grade penalty, up to and including failure in the course. Also excluded from optional class attendance are students in the advanced courses of the ROTC program.

Course grade will be based on such factors as class preparation, class participation, skill development, effectiveness of oral presentations and/or written reports, quiz grades, and test and final examination scores. It is the prerogative of the instructor to administer unannounced quizzes as part of the student evaluation process and to pass judgment on the merits of all cases involving late class submissions and class requirements missed by the students.

All students are required to attend class during the first week of the semester in order to stabilize enrollments and class rosters.

CRITERIA GOVERNING CONTINUANCE AT IUP

Continuance at IUP is determined according to the university's Academic Standards Policy as approved by the University Senate and Council of Trustees in February, 1984. This policy shall apply to all actions of Academic Review initiated after July 1, 1984, with the stipulation that the conditions pertaining to readmission during the summer, 1984, transition period will be those in effect when the student was dismissed.

To be in good standing each student must meet standards for qualitative progress, as measured by cumulative quality-point average (CQPA), and quantitative progress, as measured by cumulative credits earned.

a. To be in good standing at the end of the first full-time semester (the semester of matriculation), a student must have earned at least a 1.50 QPA. (A part-time student will be reviewed for having the first semester of 1.50 at the point of six hours registered.)
b. To be in good standing on a QUALITATIVE basis for each subsequent semester, the following scale must be maintained:

0-40 credits earned	1.80 CQPA
41 or more credits earned	2.00 CQPA

"Credits earned" includes IUP credits with grades, IUP credits recorded as P, transfer credits, and credits by exam.
c. To be in good standing on a QUANTITATIVE basis, a student must have earned at least seventy-five percent of the cumulative number of registered credits at IUP. "Registered credits" are the number of credits for which a student is enrolled at the end of the Drop/Add period. (For a student who was originally registered and charged at full-time status and who reduced during Drop/Add to part-time status, the registered credits will be calculated as twelve.)

To determine academic standing, a student's cumulative qualitative academic record is reviewed at the end of each fall semester and each spring semester and at the end of the summer sessions collectively. All summer sessions constitute a review period in the application of this policy. A quantitative measure of good standing will occur once each academic year between the termination of post-session and the beginning of the fall semester. The application of these policies for students admitted through the Educational Opportunity Program (Act 101) is defined within the approved policies for the operation of that program.

Probation: A student who does not attain either the quantitative or qualitative standards will be placed on probation. The status of a student on probation will be examined each review period to determine whether probation may be lifted.

a. A student whose cumulative qualitative academic record falls below the above standards may be continued on probation for the next two review periods (summer and fall OR fall and spring OR spring and summer).
b. A student whose cumulative quantitative academic record falls below the above standard may be continued on probation for one academic year (fall and spring, with summer attendance open).
c. A student will not remain in good standing beyond these probationary periods unless both quantitative and qualitative standards have been met.

Suspension: A student who fails to attain the required level for good standing after the probation period(s) will be suspended from the university. A student may qualify for reinstatement:

a. By attaining the minimum QPA and credits standards for the student's level by attending IUP summer sessions.
b. By formal appeal through the office of the dean of the student's college for extension of probation for one review period in exceptional and extenuating circumstances.

Filing must be before April 1 if requesting readmission for the following summer sessions or before July 1 for the fall semester starting the following September. Filing must be before November 1 if requesting readmission for the following spring semester.

All courses taken at IUP become a part of the student's permanent academic record. The record shall show hours attempted, hours earned, and quality points earned.

The academic standing of all students is computed on the basis of courses attempted at this university only. Credit is granted for work completed in other institutions in accordance with the stipulations set forth under "Admission and Registration."

At IUP, a student is considered to be making SATISFACTORY PROGRESS when he or she is permitted to enroll in credit-bearing classes in a curriculum leading to a degree or certificate. Such continued enrollment is subject to the academic policies of the institution.

ACADEMIC HONORS

Students with appropriate academic records may be graduated with one of the following distinctions:

Summa cum laude
3.75-4.00 cumulative quality-point average

Magna cum laude
3.50-3.74 cumulative quality-point average

Cum laude
3.25-3.49 cumulative quality-point average

These honors are calculated using all credits and quality points earned at IUP. Honors are not granted for subsequent degrees.

DEAN'S LIST - To be eligible for the Dean's List, which is compiled after each semester, a student must be carrying a minimum of twelve semester hours and have a minimum quality-point average of 3.25 (exclusive of P/F courses).

ADVISORY PROGRAM

A group of selected faculty members act as freshman advisers for entering freshmen in their departments. In some curriculums the advisers continue with the same group of advisees from year to year. In other curriculums the freshman advisers remain with their advisee groups only for the students' first year; under this program, the student is then assigned an academic adviser for the remaining years through to his/her degree in his/her chosen field.

Faculty advisers counsel the students on academic achievement, dropping courses, changing curriculum, student activities, study schedules, and personal problems. The adviser receives a copy of the student's permanent record at the beginning of the academic year.

CHANGES OF CURRICULUM

A student must indicate his/her desire to change to a new curriculum in the office of the dean of the college in which the student is registered if the curriculum change desired is from one department to another within the same college (for example, change from a mathematics major to a biology major) or in the office of the dean of the college to which the student wishes to transfer if the curriculum change is from one college to another (for example, secondary education major to biology major). In either case, the student will complete an application form that is available in the dean's office. Before seeking a curriculum change, it is advisable that the student consult with the chairpersons of both the "old" and "new" departments.

When a student changes colleges, the dean of the college (or dean's agent) into which the transfer is sought will evaluate the student's credits before approving the transfer. A copy of the evaluation will be made available to the student and his/her new adviser if a change in curriculum is effected.

In cases involving students who are veterans, the dean of the college into which transfer is sought (or dean's agent) shall give the veteran a statement of prospective approval and the effective date of the proposed changes. This statement shall also indicate the amount of extended training time the change of curriculum will entail and the amount of credit loss, if any. The veteran shall take this statement to the veteran's counselor at least one month prior to the effective date of the change. No transfer of curriculum shall be made by veterans until V.A. approval has been assured.

SOPHOMORE SCREENING FOR JUNIOR STATUS APPROVAL

General policy at IUP permits each college to determine its own scheme for evaluating the development and progress of its major students. However, each college is expected to employ some effective procedure for such evaluation.

Several of the colleges use a procedure called "Sophomore Screening for Junior Status Approval" with the following required: All students (in such a college) enrolled in their fourth semester or who will complete fifty-seven hours ATTEMPTED by the end of the current semester must apply for Junior Status approval by filling out an application form by the deadline date designated and announced.

All students should check with their faculty advisers to determine which colleges use "Junior Status" screening procedure and the criteria for Junior Status Approval.

INTERNSHIP/COOPERATIVE EDUCATION

Many departments of the university have developed internship/cooperative education programs which allow a student to participate in university-supervised work experiences for variable academic credit. Internships/co-ops are viewed as an integral part of a student's academic preparation. An internship/co-op gives the student an opportunity to apply theoretical and philosophical tenets of a discipline in a practical job experience related to the student's academic program.

Students may apply for an internship if they have completed fifty-seven semester hours and have at least a 2.0 QPA. Internship sites are normally located within a 500-mile radius of the campus. Overseas placements are located near an IUP center. Internships are available in state and federal offices; businesses at the local, state, and national level; state-related agencies; corporations; and foundations.

Students may apply for a co-op if they have completed 30 semester hours and have at least a 2.0 QPA. Two experiences are required. Sites are national and international. Placements parallel those of the internship program.

Students who are eligible for financial aid may receive federal and state funding while participating in an internship. Students must apply to the Relating Experience to Academic Learning Program (REAL).

Because internships are viewed as an integral part of the student's academic program, students who are interested in specific internship programs should consult with the internship adviser in the department of their major.

For general information about university internships, placement options, and REAL and WCLA experiences, the student should consult the director of Professional Laboratory Experiences and the Employment section of the Financial Aid information in this catalog.

HEALTH AND PHYSICAL EDUCATION SPECIAL REGULATIONS

Credits in health and physical education are either required of undergraduate students in the General Education segment of the university curriculum or are part of an option for students in that segment. The university requirement in physical education may be altered after consultation with the department chairperson in health and physical education, who will act upon the recommendation of the university physician and the dean, College of Human Ecology and Health Sciences.

Physically incapacitated students must obtain a medical waiver from or through the university physician. This procedure should be repeated each semester except in cases of permanent disability. The waiver form should be filed with the chairperson of the health and physical education department. Such students may elect to participate in specially arranged adaptive physical education courses or defer the university requirement until such time as the disability dissolves. These regulations do not refer to temporary illness of short duration; such cases are managed by the individual instructor.

RESERVE OFFICERS TRAINING CORPS

The United States Army established a unit of the Reserve Officers Training Corps at the university in 1950. In fulfilling the university's four-credit General Education requirement for graduation, students may take four credits of Military Science and receive full credit for the Health and Physical Education requirement. Enrollment in the four-credit ROTC option incurs no military obligation whatsoever and allows the student the option of competing for a three-year ROTC Scholarship.

Upon graduation from the university and successful completion of the Advanced Course ROTC program, the student will receive a commission as a second lieutenant and serve from three months to three years on active duty, depending on active Army requirements. As an alternative to active duty, the individual may either be chosen or volunteer to complete his/her service obligation with the Army Reserve or National Guard.

Students seeking advanced degrees can be granted an educational delay by the Army following completion of their baccalaureate degrees. Upon completion of the advanced degree, students then enter active duty or Army Reserve/National Guard duty.

ACADEMIC VIOLATIONS POLICY

IUP is an academic community within the society at large. The following policies and procedures are established to preserve the academic integrity of the university community and to provide a process which assures the necessary rights and protections for the student who allegedly violates these policies.

Violations:

a. Cheating by those who give as well as receive aid in course or lab work.
b. Intentional evading of academic policies or procedures.
c. Plagiarizing.
d. Possessing or obtaining an examination without the instructor's authority or prior knowledge.

Procedure:

If an instructor believes that a student has violated an academic policy, he/she may recommend a sanction ranging from failure in the course up to and including suspension or expulsion from the university. Recommended sanctions may include but are not limited to the following: reduction of grade in the course, failure in the course, disciplinary probation, campus community service/educational experience, suspension, and expulsion. A combination of sanctions may be recommended. The instructor must file a written report of the violation with the vice president of Student Affairs within five (5) class or work days of the violation. The instructor should also send a copy to the student. The report should be submitted on a form available in each departmental office and must include the following: name of student involved; course, instructor; date and time; circumstances and supportive date and sanction recommended.

In instances involving a violation of academic policy, or where final action on civil or criminal charges is pending, the vice president for Student Affairs or the president may summarily suspend a student consistent with the procedures outlined in THE EYE, the student handbook.

The vice president for Student Affairs or designee will formally notify the student of the allegation and the recommended sanction.

If the student disagrees with the sanction recommended, the following procedure will be followed:

1. Within six (6) class or work days of receipt of the vice president's notification, the student must request a conference with the chairperson of the department. The student and instructor involved will meet with the chairperson and conduct a hearing on the allegation. The chairperson may uphold the sanction imposed by the instructor or reduce it. Within five (5) class or work days of the hearing, the chairperson must forward a written report of his/her decision concerning the case to the student, the instructor involved, and the vice president for Student Affairs. Failure to forward a written report within the time period indicates the chairperson's affirmation of the sanction recommended by the instructor.

2. Within six (6) class or work days of the receipt of the chairperson's report, the student may appeal to the vice president for Student Affairs in writing.

3. If the chairperson decreases the sanction originally recommended by the instructor, the instructor may appeal the chairperson's ruling to the vice president for Student Affairs within six (6) class or work days of the receipt of the chairperson's report.

4. If an appeal is filed, the vice president for Student Affairs or his/her designee shall convene the university Judicial Board to hear the appeal. The UJB may accept the instructor's sanction; accept the chairperson's ruling; reduce or nullify the sanction so far recommended; or send the case back to the chairperson for reconsideration along with recommendations.

The UJB may NOT increase the sanction originally recommended by the instructor. Within five (5) class or work days of the hearing, the UJB must send a written report of its decision to the student and the instructor involved. The decision is deemed final and will be implemented by the vice president for Student Affairs.

If the student does not appeal the instructor's recommended sanction within six (6) class or work days, it shall be automatically invoked. Failure to appeal the decision constitutes a waiver of the right to a hearing.

Appeal of the deadlines established above may be made by either party to the vice president for Student Affairs.

If a faculty member chooses not to file a formal academic violation report, it is recommended that he/she complete a statement that summarizes the conference which led to resolution and agreement of sanction with signatures by both parties and copies for both the student and faculty records. No academic violation report is then made, but if a student appeals at a later time, the faculty member may then file the formal academic violation report.

IUP STUDENT GRADE APPEAL POLICY

GRADE REVIEW POLICY

If a student disagrees with the evaluation of his/her work by the instructor but has no basis for a charge of "discrimination" or "capricious evaluation," the student should discuss the matter directly with the instructor, and if unsatisfied, with the department chairperson, and it still unsatisfied, with the dean of the college in which the course was offered. In such cases, the decision of the instructor shall be final.

If a student believes that an improper grade has been assigned, an appeal may be filed on the following grounds:

1. Discrimination: On the basis of race, religion, national origin, sex, age, ancestry, handicapped status, affectional or lifestyle preference, or political affiliation.

2. Capricious Evaluation: Significant and unwarranted deviation from grading procedures and course outlines set at the beginning of the course (ordinarily during the first week of the course) or grade assigned arbitrarily on the basis of whim or impulse. The student may not claim capriciousness if he or she disagrees with the subjective professional evaluation of the instructor.

PROCEDURES OF APPEAL

LEVEL I: INFORMAL RESOLUTION

Every effort should be made to resolve the disagreement at Level I. The student must first seek a resolution to the disagreement with the instructor. It the student is not satisfied with the results, the student must then speak with the chairperson of the department that offers the course. If still unsatisfied, the student must discuss the matter with the dean of the college in which the course was offered. A Student Government Association (SGA) member may accompany and advise the student during the Level I procedures. Only after all attempts for the resolution at Level I have been exhausted may the student initiate Level II.

LEVEL II: APPEAL SCREENING

A. Composition: Each year there shall be appointed a Grade Appeals Committee to determine the existence of the substantive basis for appeal. The committee will be composed of seven voting members: three faculty members appointed by APSCUF, three faculty/administrators elected by the Senate Academic Committee, and one student elected by the Senate Academic Committee. A voting majority of the Grade Appeal Committee must be faculty members.

B. Procedure to Initiate Appeal: To initiate Level II of the appeal, the student must file an appeal form with the Provost's Office. This form must be filed within sixty (60) calendar days of the beginning of the semester immediately following the semester in which the grade was received. (Note: Grade appeals will not generally be processed during the summer. Therefore, the appeal of any grade received in the spring or summer sessions normally will be processed in the fall. A review will be scheduled in the summer only when the student's academic eligibility is jeopardized by the grade in question or when the student is a graduating senior.) The Provost's Office will notify the appropriate dean, department chairperson, faculty member, and the SGA president of the student's initiation of the Level II process.

C. Procedure to Process Appeal: The student will be expected to submit written documentation of his/her complaint and the faculty member will be expected to submit in writing the course grading procedure and any other pertinent information. Appeals based on discrimination will be reviewed according to current standards of nondiscriminatory action. Appeals based on capriciousness will be reviewed in light of the faculty member's announced evaluation and grading system. The committee will review the materials to deny or confirm appeal continuance. Denial of appeal continuance must be by a negative vote of four members of the committee. This committee will inform the Provost's Office of its findings. Within five (5) working or class days of the committee's report, the provost or designee will notify the student and the faculty member of the findings. If the basis for appeal is determined to be substantive, the provost or designee will convene a Grade Review Panel within fifteen (15) working or class days.

LEVEL III: APPEAL REVIEW

A. Composition: The Grade Review Panel will consist of five voting members: one academic dean or associate dean and four faculty members. Four-fifths of the voting members will be a quorum. The SGA Academic Affairs Committee chairperson may advise as requested by the student. The affirmative action officer will advise in appeals based on discrimination. The panel will be constituted from the Grade Review Pool by random selection. The panel chairperson will be elected by and from the panel before each review.

B. Membership: The Grade Review Pool will be established in the spring term to serve for the following academic year. The pool and rotational order within the pool will be established by the Office of the Provost. A pool of three deans or associate deans and twelve full-time faculty members will be maintained. In establishing the membership for each review panel, prior to each review the names of those designated as primary members of the specific panel and available as alternates will be supplied to all parties involved. A panel member may request (to the provost or designee) disqualification due to a conflict of interest. The student and the faculty member may eliminate names in proportion to the composition of the panel. Each may eliminate only one dean/associate dean and four faculty. Resulting vacancies will be filled from the appropriate dean and faculty. If through self-disqualification and challenges a panel cannot be constituted from the pool, then the Office of the Provost will supplement the pool using appropriate random selection methods.

C. Procedure:

1. Both the student and the instructor will have the right to appear before the panel and offer evidence. In addition to those specified in Level III, Section A, each may also bring one observer with whom they may consult but who may not participate in the review.

2. The panel shall determine its rules of order for internal operation. After hearing the evidence brought forth, the panel will privately deliberate and render a decision. If the grade appeal is upheld, the panel will constitute a committee of three appropriate faculty (ordinarily faculty from the department in which the course is offered) who will review the student's work and determine the appropriate grade or suitable remedy. The panel will incorporate this information in the determination which they then forward to the Provost's Office for implementation. (The panel may recommend or the department may deem it appropriate that the grades of other students in the class also be reviewed.)

3. The written report sent to the Provost's Office will state whether the student's appeal is upheld or denied; if upheld, the committee's evaluation and remedy will be included. All documents supporting the report will be sealed and kept only as long as necessary to insure the appropriate action is taken (normally one year) before being destroyed or returned to the individual presenting the evidence.

IMPLEMENTATION

A. Faculty Compensation: If a Review Panel (hearing) is scheduled at a time in the summer when any faculty member involved is not under contract, the faculty member will be compensated under terms mutually agreed upon at Meet-and-Discuss.

B. Continuing Rights: This appeal does not supplant any legal rights afforded by the Commonwealth of Pennsylvania and/or the government of the United States. Nothing in this policy abrogates or modifies any provisions of or rights under the Collective Bargaining Agreement.

C. Intended Purpose: The grade appeal procedures are designed simply as a means to resolve differences between students and faculty related to grading. Under no circumstances should the results of a grade appeal be used for disciplinary action or personnel decision.

D. *Amendment: Amendments may be implemented upon concurrence by University Senate, APSCUF Representative Council, and Meet-and-Discuss.

* NOTE OF RECORD: In the amendment process outlined in "Implementation" - Section D, specification of University Senate implies the Council of Trustees' role in approving Senate actions and recognizes the Council of Trustees' final action to change policy.

E. Renewal: This policy will expire in three (3) years after its date of implementation unless this policy is reviewed under Senate Academic Committee and Senate procedures and renewed (with possible amendments) at Meet-and-Discuss.

This policy was approved by the University Senate on October 8, 1985, and by the Council of Trustees on December 6, 1985, to be effective in the spring semester, 1986.

COURSE NUMBERS AND ABBREVIATIONS

COURSE NUMBERS - Courses for freshmen are numbered in the 100s, for sophomores in the 200s, for juniors in the 300s, and for seniors in the 400s.

Required courses usually are numbered from 1 to 50 and elective courses are numbered from 51 to 100, within each 100.

DEPARTMENTAL COURSE ABBREVIATIONS. The departmental abbreviations used in the undergraduate catalog and the corresponding transcript number codes (00) used to identify courses are as follows:

AC	85	ADULT/COMMUNITY EDUCATION	GM	34	GERMAN
AD	26	ADMINISTRATIVE SERVICES	GR	90	GRADUATE SCHOOL
AG	28	ACCOUNTING	GS	14	GEOSCIENCE
AH	88	ART HISTORY	HE	43	HOME ECONOMICS EDUCATION
AL	05	ALLIED HEALTH PROFESSIONS	HI	40	HISTORY
AM	56	APPLIED MUSIC	HP	37	HEALTH AND PHYSICAL EDUCATION
AN	02	ANTHROPOLOGY	HU	92	HUMANITIES
AR	01	ART	IM		INFORMATION MANAGEMENT
AT	89	ART EDUCATION	IS	83	INTERNATIONAL STUDIES
AY	03	ASTRONOMY	JN	36	JOURNALISM
BA	08	BUSINESS ADMINISTRATION	LA	48	LATIN
BE	09	BUSINESS EDUCATION	LB	59	LIBRARY
BI	04	BIOLOGY	LI	47	LINGUISTICS
BU	07	BUSINESS	LR	84	LABOR RELATIONS
CE	13	COUNSELOR EDUCATION	MA	49	MATHEMATICS
CH	10	CHEMISTRY	MG	38	MANAGEMENT
CI	12	CHINESE	MI	54	MARINE SCIENCE
CL	33	CRITICAL LANGUAGE	MK	39	MARKETING
CM	45	COMMUNICATIONS MEDIA	MS	52	MILITARY SCIENCE
CN	86	CONTINUING EDUCATION	MT	62	MEDICAL TECHNOLOGY
CO	18	COMPUTER SCIENCE	MU	55	MUSIC
CR	46	CRIMINOLOGY	NS	93	NATURAL SCIENCES
CS	11	CONSUMER SERVICES	NU	58	NURSING
DE	06	DISTRIBUTIVE EDUCATION	PC	70	PSYCHOLOGY
EA	41	EDUCATIONAL ADMINISTRATION	PH	60	PHILOSOPHY
EC	15	ECONOMICS	PN	73	PUBLIC SCHOOL NURSING
ED	16	EDUCATION	PS	67	POLITICAL SCIENCE
EE	21	EARLY ELEMENTARY	PY	64	PHYSICS
EH	27	EDUCATION OF HEARING IMPAIRED	QB	68	QUANTITATIVE BUSINESS
EL	19	ELEMENTARY EDUCATION	RH	53	REHABILITATION
EM	24	ELEMENTARY MATHEMATICS	RS	72	RELIGIOUS STUDIES
EN	22	ENGLISH	RT	63	RESPIRATORY THERAPY
EP	71	EDUCATIONAL PSYCHOLOGY	RU	74	RUSSIAN
ES	20	ELEMENTARY SCIENCE	SA	76	SAFETY SCIENCE
EX	50	EDUCATION OF EXCEPTIONAL CHILDREN	SC	75	SCIENCE
FA	91	FINE ARTS	SH	51	SPEECH AND HEARING
FE	17	FOUNDATIONS OF EDUCATION	SO	78	SOCIOLOGY
FI	69	FINANCE	SP	82	SPANISH
FL	23	FOREIGN LANGUAGES	SS	79	SOCIAL SCIENCES
FN	44	FOOD AND NUTRITION	ST	80	STUDENT PERSONNEL
FR	25	FRENCH	SW	77	SOCIAL WORK
GE	31	GEOGRAPHY	TH	81	THEATER
GK	35	GREEK	VO	29	VOCATIONAL EDUCATION
GL	32	GEOLOGY	XX	94	GENERAL ELECTIVES

Requirements For Graduation

Undergraduate students at IUP may pursue programs of study in any one of the six undergraduate colleges: the College of Business; the College of Education; the College of Fine Arts; the College of Human Ecology and Health Sciences; the College of Humanities and Social Sciences; or the College of Natural Sciences and Mathematics. A student may earn the degree of Bachelor of Arts, Bachelor of Science, Bachelor of Fine Arts, or the Bachelor of Science in Education. To do so, the student must satisfy all of the degree requirements, which fall into three categories: 1) university requirements; 2) college requirements; 3) department requirements. Requirements of the latter two categories may be found under the college and the department in which the student is pursuing a program of study.

University requirements for graduation in all curriculums consist of General Education requirements, residency requirements, and the semester hour and cumulative quality-point average requirements.

GENERAL EDUCATION

All students are obligated to fulfill a basic program in General Education consisting of fifty-two semester hours. Different colleges and sometimes departments within colleges may have specific variations as to how these General Education requirements are to be met.

The primary objective of General Education is to develop those understandings, attitudes, values, and social skills that will enable the student to enjoy a life that is satisfying to himself/herself as an individual and that will enable him/her to play a constructive role in his/her community and in society, without respect to his/her professional vocational interest or activity.

The courses in the program will be distributed throughout the four years of university study, but the basic or introductory courses should be concentrated in the first two years of the student's program.

GENERAL EDUCATION REQUIREMENTS

ENGLISH — Three Courses — 10 sh

EN	101 - English I	4
EN	102 - English II	3
EN	201 - English III	3

(OR: EN 210 required substitute for EN 201 for majors in English and Communication)

FINE ARTS — One Course — 3 sh

AH	101 - Introduction to Art	3
MU	101 - Introduction to Music	3
TH	101 - Introduction to Theater	3

HUMANITIES — Two or Three Courses* — 6-9 sh

*If only two courses are selected from humanities, one additional course must be selected from courses listed as natural science or science/math electives.

Foreign Languages (two courses in language sequence; only six semester hours of foreign languages courses apply to General Education requirements)

AH	115 - Ancient and Medieval Art	3
AH	116 - Renaissance and Baroque Art	3
EN	346 - Contemporary American and British Poetry	3
EN	347 - Modern American Fiction	3
EN	348 - Black American Literature	3
EN	349 - The English Bible as Literature	3
HI	101 - History of Civilization I	3
MU	301 - Music History I	3
PH	101 - General Logic: Methods of Critical Thinking	3
PH	120 - Introduction to Philosophy	3
PH	221 - Symbolic Logic I	3
PH	222 - Ethics	3
PH	223 - Philosophy of Art	3
RS	100 - Introduction to Religion	3
RS	110 - World Religions	3

*Note: Students in the colleges of Natural Sciences and Mathematics and Humanities and Social Sciences take one year of intermediate-level foreign language. Students in the colleges of Business, Education, Fine Arts, and Human Ecology and Health Sciences may elect one year of a foreign language, any appropriate level, or two courses from the above list. Exception: English education majors must take the intermediate-level sequence of a foreign language.

MATHEMATICS — One Course — 3-4 sh

Course designated by department to meet requirement:

MA	101 - Foundations of Mathematics	3
MA	110 - Elementary Functions	3
MA	121 - Calculus I for the Natural and Social Sciences and Business	4
MA	123 - Calculus I for Physics and Chemistry	4
MA	127 - Calculus I	4
MA	151 - Math for Elementary Teachers I (specific departments only)	3
MA	217 - Probability and Statistics	3

NATURAL SCIENCES — A Two-Semester Sequence in Laboratory Science — 8 sh

Sequence may be designated by department.

BI	103-104 - General Biology I and II	8 sh total
CH	101-102 - College Chemistry I and II (specific departments only)	8 sh total
CH	111-112 - General Chemistry I and II	8 sh total
CH	113-114 - Concepts in Chemistry	8 sh total
GS	101/102-103/104 - Earth Science I and II with labs	8 sh total
GS	121/131-122/132 - General Geology I and II with labs	8 sh total
PY	111/112 and PY 112/122 - Physics I and II with labs	8 sh total
PY	131/141 and PY 132/142 - Physics I and II with labs	8 sh total
SC	105-106 - Physical Science I and II (either order)	8 sh total

SOCIAL SCIENCES — Five Courses from Twelve Alternatives — 15 sh

1.	AN 110 - Introduction to Anthropology	3
2.	CR 101 - General Administration of Justice	3
3.	EC 101 - Basic Economics	3
	OR	
	EC 121 - Principles of Economics I	3
4.	GE 101 - World Geography	3
5.	GE 102 - Geography of United States and Canada	3
6.	HI 102 - History of Civilization II	3
7.	HI 103 - History of US and PA I	3
	OR	
	HI 104 - History of US and PA II*	3
8.	PS 101 - World Politics	3
9.	PS 111 - American Politics	3
10.	PC 101 - General Psychology*	3
11.	SO 151 - Principles of Sociology	3
12.	SS 101 - Contemporary Social Science	3

*Required for all students in College of Education and teacher certification programs.

HEALTH AND PHYSICAL EDUCATION — One Option — 4 sh

OPTION 1: Health and Physical Education

HP101 - Personal and Community Health	2
AND	
HP — - Physical Activity courses - 2 courses, 1 credit each (HP 110-138, 144-172, 260-262, 266)	2

OPTION 2: Military Science
MS101 - World Military History and Lab 2
MS102 - American Military History and Lab 2

OPTION 3: Military Service 4
Veterans are given four credits toward these requirements.
Verification of service must be established by form DD 214.

Students continuing in Military Science (ROTC) beyond their freshman year should use the elective hours available to them by their department towards Military Science classes. Upon entering the sophomore year of Military Science, students are encouraged to discuss this with their Military Science class adviser, who will assist them in this matter.

SCIENCE/MATH ELECTIVES — Zero to One Course — 0-3 sh

If only six credits are earned in the humanities group, an additional course must be selected from the natural science electives or the following:

BI	110 -	Plant Biology	5
BI	120 -	Animal Biology	5
BI	261 -	Ornithology	3
BI	262 -	Etomology	3
BI	271 -	Evolution	3
BI	272 -	Conservation of Plant and Animal Resources	3
CO	110 -	Intro to Computer Science	3
CO	200 -	Intro to Computers	3
GS	110 -	General Astronomy	3
GS	120 -	Geology of Pennsylvania	3
GS	330 -	Paleontology	3
GS	321 -	Mineralogy	3
GS	361 -	Oceanography	3
GS	371 -	Meteorology I	3
MA	110 -	Elementary Functions	3
MA	121 -	Calculus I for the Natural and Social Sciences and Business	4
MA	122 -	Calculus II for the Natural and Social Sciences and Business	4
MA	217 -	Probability and Statistics	3
PY	222 -	Mechanics I	2
PY	231 -	Electronics	4
PY	242 -	Optics	3
PY	342 -	Thermal and Statistical Physics	3
PY	472 -	Nuclear Physics	3
SC	111 -	Science in Modern Civilization	3
SC	401 -	Growth of Science and Its Concepts I	3
SC	402 -	Growth of Science and Its Concepts II	3

GENERAL EDUCATION SUBSTITUTIONS

The following courses constitute the approved substitution list as approved by the University Senate. All courses on the approved substitution list require the approval of the student's major adviser. These General Education substitutions may not be taken pass-fail if they are taken as General Education courses.

GENERAL EDUCATION COURSE		APPROVED SUBSTITUTIONS	
AN	110 Intro to Anthropology	AN	211 Cultural Anthropology
		AN	312 World Ethnography
		AN	313 World Archaeology
CR	101 General Administration of Justice	CR	102 Criminology
GE	101 World Geography: Man and Environment	GE	230 Cultural Geography
		GE	231 Economic Geography
GE	102 Geography of the U.S. and Canada	GE	251 Geography of Pennsylvania
		GE	252 Geography of Latin America
		GE	253 Geography of Europe
		GE	254 Geography of USSR
		GE	255 Geography of Africa
		GE	256 Geography of East Asia
		GE	257 Geography of South and Southeast Asia
HI	104 History of U.S. and Pa. II	HI	103 History of U.S. and Pa. I
PH	110 World Religions	PH	210 World Scriptures
PH	221 Symbolic Logic I	PH	330 Philosophy of Science
MU	301 Music History I	MU	103 Perspectives in Jazz
		MU	201 Jazz History I
		MU	302 Music History II
		MU	303 Music History III
MA	101 Foundations of Math	MA	102 Finite Mathematics
		MA	110 Elementary Functions
		MA	121 Calculus I for the Natural and Soc Sci & Bus
		MA	123 Calculus I for Physics and Chemistry
		MA	127 Calculus I
		MA	214 Probability and Statistics for Business Majors
		MA	217 Probability and Statistics
SC	105 Physical Science I	PY	111 Physics I (lec & lab)
		PY	131 Physics I (lec & lab-Calc)
PY	111 Physics I (lec)	PY	131 Physics I (lec-Calc)
PY	121 Physics I (lab)	PY	132 Physics I (lab-Calc)
PY	112 Physics II (lec)	PY	132 Physics II (lec-Calc)
PY	122 Physics II (lab)	PY	142 Physics II (lab-Calc)
PY	131 Physics I (lec-Calc)	PY	111 Physics I (lec)
PY	141 Physics I (lab-Calc)	PY	121 Physics I (lab)
PY	132 Physics II (lec-Calc)	PY	112 Physics II (lec)
PY	142 Physics II (lab-Calc)	PY	142 Physics II (lab)

RESIDENCY REQUIREMENT

All students receiving an initial IUP baccalaureate degree are required to complete forty-five semester hours in IUP courses. At least fifteen semester hours in IUP courses are required to fulfill an IUP major and a minimum of six semester hours for a minor. Normally, the student will complete the final thirty semester hours in residence in IUP courses, unless specific approval has been secured from the dean of the student's college. Exception to the above requirements for courses to be earned in residence at IUP may be granted by the college deans based upon the appropriateness and academic integrity of the courses in question. This approval is generally sought as part of the process for prior approval of off-campus coursework.

PRE-APPROVAL FOR OFF-CAMPUS COURSEWORK

Students enrolled at IUP who wish to take coursework at another institution (either during the summer or regular semesters) must complete an Application for Coursework Outside IUP prior to taking the course(s). Only the credits from the course(s) transfer, not the grade; therefore, students cannot use outside coursework for IUP's repeat policy. Only the credits for which students receive the grade of A, B, or C will transfer. If P/F is the only grading option available, there must be a narrative evaluation from the faculty member certifying that the work was of C level or better. No more than sixty credits total may be earned at a junior or community college for application toward an IUP degree. If the courses are being taken within the student's last thirty credits, the courses must be taken at IUP unless the student's residency requirement is waived by the college dean. Courses without prior approval are taken at the risk of the student; there is no obligation on the part of any officer of this university to accept or transfer such credit.

Forms for approval of off-campus coursework are available in the Registrar's Office, G-5 Sutton Hall. Full directions on the form outline the steps involving the registrar, student's adviser, and college dean. After completing off-campus coursework, students should have the institution at which the work was taken send a final official transcript directly to Transfer Evaluation Services, G-5 Sutton Hall, IUP, Indiana, PA 15705. Copies of transcripts issued to or hand carried by students will not be accepted.

SEMESTER HOUR AND CUMULATIVE QUALITY-POINT AVERAGE REQUIREMENT

Each student must complete a minimum of 124 semester hours to graduate, including 52 hours in General Education (all on a passing basis), and must have a 2.0 ("C" grade) cumulative quality-point-average and a 2.0 ("C") average in his/her major and/or minor field.

ADVANCED PLACEMENT AND EXEMPTION EXAMINATIONS

Courses taken by students prior to admission to college under the Advanced Placement Program of the College Entrance Examination Board may be recognized by the award of college credit or by exemption from required subjects. Those who earn a grade of 3, 4, or 5 in the Advanced Placement Examination will be granted credit toward the number of credit hours required for graduation.

For students who have had other unusual opportunities for instruction or have advanced in a given field, an opportunity to gain exemption from a course is afforded through exemption examinations, given at the discretion of each department. Departments offering such options will publicize their availability campus-wide every year. A student who passes an exemption examination will be exempt from taking that course in his/her academic program.

When a student receives CREDIT for a course by examination, the credit will be applied to graduation requirements just as though the course had been taken. If a student is granted EXEMPTION ONLY from a course, he/she will be permitted to take a free elective in place of that course.

This enables the student to further specialize, to correct weaknesses outside his/her major field, to build his/her knowledge in an ancillary area, or to introduce himself/herself to an entirely different area.

Courses for which credit or exemption are awarded by examination will not be used in the determination of quality-point averages.

ELIGIBILITY AND APPLICATION FOR GRADUATION

Commencement ceremonies are held annually at IUP at the conclusion of the spring semester during the month of May. Only students who have completed all requirements for graduation by the end of the spring semester are eligible to participate in the commencement exercises. Students who have withdrawn from courses or have elected to take incompletes or have failed courses during the spring semester and thus have not met the requirements for graduation may not participate in commencement exercises until those requirements have been fulfilled. Students completing requirements in August or December are included on the graduation list the following May and may participate in commencement at that time.

It is the student's responsibility to complete an application-for-graduation form in the office of the dean of his/her college early in the term prior to graduation. Students are responsible for knowing and fulfilling the requirements for graduation in their degree program.

Certification for graduation is not final until approved by the dean of the college in which the student is enrolled.

Students who expect to graduate at the end of the summer session must complete all requirements for graduation by the conclusion of the main session UNLESS PRIOR EXCEPTION is made by the student's college dean. Diplomas will not be issued until all bills and obligations have been satisfied, including the degree fee.

NON-NATIVE STUDENTS: English Language Requirements

Non-native students of English, either international students or those from the U.S. for whom English is not their first learned language, are required to take an ESL Screening Placement Test prior to registration in the first semester attending IUP. The test is administered prior to registration in both the fall and spring semesters. Results of this test are used to determine which English course (EN 100 ESL, EN 101 ESL, EN 102 ESL, EN 201 ESL) a newly admitted non-native student must register for. In addition, any currently enrolled non-native student can take the regularly scheduled test to determine registration for non-ESL English courses. For further information, contact Dr. Dan Tannacito, 212 Eicher Hall; telephone (412) 357-7081.

UNDERGRADUATE CATALOG APPLICABILITY TIMEFRAME

The university reserves the right to modify degree requirements through established governance channels. However, the general policy has been established that the following timeframe regulations form the basis for application of the university's undergraduate degree requirements: contact Dr. Dan Tannacito, 212 Eicher Hall; telephone (412) 357-7081.

1. A student who has been in continuous registration (fall and spring semesters) or who has interruption(s) of less than two calendar years is governed by the requirements outlined in the catalog in effect at the time of entrance into a degree program (major).

   a. A student who changes major will be governed by the requirements of the major and/or college at the time of acceptance into the new major, without change of general education requirements except as specified by the new major.

   b. A student entering through the nondegree program is governed by the requirements in effect at the time degree candidacy is awarded.

   c. A part-time student may be covered by these provisions of continuous registration to a maximum of ten years.

2. A student whose education is interrupted by two or more calendar years will be governed by the requirements in effect at the time of readmission to the university. The readmission may carry specific requirements/substitutions necessary to provide for program integrity.

3. The applicability of coursework completed more than ten years prior to the degree date is subject to review by the dean or designee for evaluation on a course-by-course basis.

The College of Business

CYRUS A. ALTIMUS, DEAN; BERNARD A. MOREAU, INTERIM ASSOCIATE DEAN

The establishment of a College of Business was authorized by the IUP Board of Trustees in May, 1966.

Departments within the College of Business include Accounting, Administrative Services and Business Education, Finance and Management Information Systems, and Management and Marketing.

The Bachelor of Science degree is offered to the Accounting, Finance, Management Information Systems, Management, Marketing, and Office Administration majors. The Administrative Services and Business Education Department offers the Bachelor of Science in Education degree with a Business Education major and Bachelor of Science in Education with a Marketing and Distributive Education major. There is also a two-year Associate of Arts degree in Business with concentrations in accounting and computers and office information systems.

Bachelor of Science Degree

For those pursuing the Bachelor of Science degree, IUP's training will provide a broad liberal background in the behavioral sciences; a keen perception of the socioeconomic world in which we live and work; a foundation of general professional education for personally fruitful and socially useful careers in the varied fields of business; and opportunity to obtain the specialized knowledge and skills essential to future occupational growth and advancement. There are six areas of specialization for those pursuing the Bachelor of Science in Business Administration - Accounting, Finance, Management, Marketing, Management Information Systems, or Office Administration. Each area provides for a variety of business and business-related courses which are designed to enrich the student's understanding of the modern business system.

Entering IUP students not initially admitted to the College of Business must apply individually for change of major, which will be granted only to those who have completed at least twenty-four credits at IUP and have achieved no less than a 2.4 grade point average at IUP. Students not accepted by the College of Business are not allowed in upper division business courses without specific written permission from the chairperson or dean. A student may not pursue course-work in the College of Business with the expectation of graduating from the College of Business unless he/she has been accepted as a degree candidate in the College of Business.

College of Business students may, in consultation with their advisers, plan their program of study to obtain a minor in an area of business specialization other than their major or a related area outside of the College of Business.

Bachelor of Science in Education Degree

IUP's College of Business seeks to serve the needs of its students and the needs of business, industry, and education through its diverse programs. Known for fifty years for excellence in Business Education, IUP's program in Distributive Education prepares teacher-coordinators for secondary schools offering programs in marketing, distribution, and cooperative work experience. These two degree areas (Bachelor of Science in Education with a Business Education major and the Bachelor of Science in Education with a Marketing Education major) are designed to prepare teachers for comprehensive high schools, area vocational-technical schools, and community colleges.

Associate of Arts Degree

Students who desire a two-year program that prepares them to enter the business world may elect to pursue the Associate of Arts degree program at the branch campuses. For this degree, students may specialize in Accounting or Accounting and Office Administration Systems. The Accounting AA program may require some work to be taken at the Indiana Campus.

ACCOUNTING DEPARTMENT

DONALD J. ROBBINS, CHAIRPERSON; BURNER, CHEN, W. DAVIS, GHOBASHY, HYDER, LINDH, PLIVELIC, PONKO, SHEIKHOLESLAMI, SOWELL, TIGER, YEREP

The Accounting Department provides the training necessary for one to enter the fields of public accounting, accounting in business or industry, and governmental accounting.

BACHELOR OF SCIENCE in ACCOUNTING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA121
Social Science: EC121, PC101
Science/Math Elective: MA214

MAJOR: Business Administration Core			36
Required courses:			
AD235	Introduction to Business Law	3 sh	
AD321	Business and Interpersonal Communications	3 sh	
AG201	Principles of Accounting I	3 sh	
AG202	Principles of Accounting II	3 sh	
EC122	Principles of Economics II	3 sh	
QB215	Business Statistics	3 sh	
IM241	Intro to Management Info Systems	3 sh	
FI311	Finance I	3 sh	
QB/MG360	Management and Production Concepts	3 sh	
MG311	Human Behavior in Organizations	3 sh	
MG495	Business Policy	3 sh	
MK320	Marketing	3 sh	
OTHER REQUIREMENTS: Accounting			27
Required Courses:			
AG301	Intermediate Accounting I	3 sh	
AG302	Intermediate Accounting II	3 sh	
AG311	Cost Accounting	3 sh	
AG401	Advanced Principles of Accounting	3 sh	
AG412	Advanced Cost Accounting	3 sh	
AG421	Federal Taxes	3 sh	
AG431	Auditing	3 sh	
Controlled Electives:			
Two courses, one of which must be an AG course, from list: AD336, AG422, AG435, AG441, AG451, EC325, EC334		6 sh	
FREE ELECTIVES:			8
		TOTAL DEGREE REQUIREMENTS:	**124**

ADMINISTRATIVE SERVICES AND BUSINESS EDUCATION DEPARTMENT

RUTH MORRIS, CHAIRPERSON; AMES, BIANCO, BRANDENBURG, DEMAND, MAHAN, MOREAU, OVERTON-PARKER, POLESKY, RAY, ROBERTS, ROWELL, STEIGMANN, STROCK, TROXELL

This department offers three four-year programs and a two-year associate degree program. The associate degree is offered at the Armstrong and Punxsutawney campuses only. The department offers the following degrees: Bachelor of Science in Education with a Business Education major, Bachelor of Science in Education with a Marketing and Distributive Education major, Bachelor of Science with a major in Office Administration, and a two-year Associate of Arts degree with tracks in Accounting and computer and office information systems.

The Business Education major and Marketing and Distributive Education major interested in teaching in high schools and vocational-technical schools have a choice in the following certification areas: Accounting, Data Processing, Secretarial, Office Technologies, Marketing, and Distributive Education. Students must select two or more areas of certification.

The Office Administration major prepares students for careers in business, industry, and government as administrative assistants, office managers, records administrators, and information processing managers.

Students who want a two-year program that prepares them for entering careers in business and government may select an Associate Degree program. An Accounting track is offered only at the Punxsutawney campus; at both campuses a track in computer information systems is available.

BUSINESS EDUCATION MAJOR (B.S. IN EDUCATION)

The Indiana University of Pennsylvania Business Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and to the certification in Pennsylvania as a business education teacher.

A student must apply to the dean of the College of Education to receive an initial certificate to teach in Pennsylvania's public schools. Certification to be a business education teacher is approved by the Dean of the College of Education when a student has met all the requirements in professional education, general education, and business education major courses.

The curriculum in Business Education prepares students for a professional career in teaching office occupations. The Business Education curriculum is designed with five areas of certification or fields of specialization. The five fields of certification are Accounting, Data Processing, Office Technologies, Marketing, and Secretarial. Students may pursue the work of the entire curriculum or they may elect to pursue work according to their aptitudes as follows:

1. The complete program leads to certification in all of the high school business subjects. Those who possess aptitudes that indicate success in Accounting, Data Processing, Marketing, Office Technologies, and Secretarial work may pursue the complete program if they wish. School administrators believe that the complete program is desirable for breadth of certification when teaching in the public schools of the Commonwealth of Pennsylvania.
2. The accounting field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Accounting and Office Technologies.
3. The secretarial field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Secretarial subjects and Office Technologies.
4. The data processing field includes all courses in the curriculum listed under that heading and meets the requirements for certification in Data Processing and Office Technologies.

All Business Education majors are required to complete the requirements for certification in at least two of the following areas of certification: Accounting, Data Processing, Marketing, Secretarial, and Office Technologies.

Practical Business Experience

Before graduation, each student must document completion of 500 hours of secretarial practice, accounting practice, data processing, clerical practice, or related work experience. This experience should be in the field or fields in which the student is contemplating certification and can be acquired during summer vacations and in offices on the campus during the regular school term.

BACHELOR OF SCIENCE IN EDUCATION in BUSINESS EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Mathematics: BE111

Social Science: EC121, HI104, PC101
Science/Math Elective: BE335

MAJOR: **45**

Required courses: Business Education Core

AD101	Business Organization and Management	3 sh
AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AD337	Consumer Law	3 sh
BE132	Intermediate Typing	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
DE333	Principles of Selling	3 sh
IM241	Introduction to MIS	3 sh

Controlled electives:

Areas of Certification	18 sh

OTHER REQUIREMENTS: **30**

Professional Education Sequence

BE311	Methods and Eval in Business Education I	3 sh
BE312	Methods and Evaluation in Business Education II	3 sh
CM1301	Instructional Media	3 sh
ED242	Pre-student Teaching Experience I	1 sh
ED342	Pre-student Teaching Experience II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: **0**

TOTAL DEGREE REQUIREMENTS: 127

MARKETING AND DISTRIBUTIVE EDUCATION MAJOR (B.S. IN EDUCATION)

The IUP Marketing and Distributive Education program is accredited by the National Council for Accreditation of Teacher Education (NCATE). The program leads to the degree of Bachelor of Science in Education and to the certification in Pennsylvania as a marketing and distributive education teacher.

A student must apply to the dean of the College of Education to receive an initial certificate to teach in Pennsylvania's public schools. Certification to be a distributive education teacher is approved by the dean of the College of Education when a student has met all the requirements in professional education, general education, and marketing and distributive education major courses.

The curriculum in marketing education is designed to prepare students for a professional career teaching the distributive occupations. Students following this program will be graduated as teacher-coordinators of distributive education and will be also certified to teach certain courses in business education. Additional certification in business education is recommended.

Teaching in the field of marketing and distributive education combines the satisfaction of teaching with the enjoyment of public relations work in the distributive area of business-retailing, wholesaling, and service enterprises. The student who likes the prestige of teaching, along with the plus values of working with business leaders and young people, will find this a challenging and rewarding career. Marketing education presents a promising future for persons in the teaching profession. With the recognition of the importance of distribution to our national economy, this vocational field of teaching is expanding rapidly.

BACHELOR OF SCIENCE IN EDUCATION in MARKETING AND DISTRIBUTIVE EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Mathematics: BE111
Social Science: EC121, PC101, HI104
Science/Math electives: BE335

MAJOR: **42**

Required courses:

AD101	Business Organization and Management	3 sh
AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AD337	Consumer Law	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
BE132	Intermediate Typewriting	3 sh
DE331	Modern Merchandising	3 sh
DE332	Retail Management	3 sh
DE333	Principles of Selling	3 sh
DE434	Supervised Work Experience	3 sh
IM241	Introduction to MIS	3 sh
MK320	Principles of Marketing	3 sh

Controlled elective:

MK—	Marketing elective	3 sh

OTHER REQUIREMENTS: **30**

Professional Education Sequence

CM101	Instructional Media	3 sh
BE311	Methods and Eval in Business Education I	3 sh
DE413	Methods and Eval in Distributive Education II	3 sh
ED242	Pre-student Teaching Experience I	1 sh
ED342	Pre-student Teaching Experience II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
EP302	Education Psychology	3 sh
FE302	History and Philosophy of American Education	3 sh

FREE ELECTIVES **3**

TOTAL DEGREE REQUIREMENTS: 127

OFFICE ADMINISTRATION MAJOR (Bachelor of Science Degree)

Office Administration is one of the most challenging careers in business, industry, and government. The Office Administration program is built on a broad general education which provides students with a fundamental understanding of the society in which they live and work. The program strives to develop the student's knowledge of the functional areas of business (accounting, finance, and marketing), the behavioral sciences, the management sciences, and the systems approach to problem solving. An integral part of each student's program is an intensive study of office administration emphasizing the decision-making aspect of office activities and giving in-depth experiences required for an understanding of the total office system and its relationship to the total business and economic system.

Upon completion of the office administration program, graduates will be able to pursue careers as administrative assistants in business, industry, and government; as administrative secretaries; as office managers and supervisors; and as records managers and administrators.

BACHELOR OF SCIENCE in OFFICE ADMINISTRATION

GENERAL EDUCATION: As outlined in General Education section the following specifications: **52**

Mathematics: BE111
Social Science: EC121, PC101
Science/Math electives: MA214

MAJOR: **36**

Required courses: Business Administration Core

AD235	Introduction to Business Law	3 sh
AD321	Business Interpersonal Communications	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
BA495	Business Policy	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Introduction to MIS	3 sh
FI310	Finance	3 sh
QB/MG360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MK320	Principles of Marketing	3 sh

OTHER REQUIREMENTS: Office Administration **27**

AD412	Administration Office Services	3 sh
AD413	Word Processing Concepts	3 sh
AD415	Records Administration	3 sh
AD430	Office Systems	3 sh
BE132	Intermediate Typing	3 sh
BE274	Information Processing Applications	3 sh
BE264	Office Procedures	3 sh
	Business Electives	6 sh

FREE ELECTIVES: **9**

TOTAL DEGREE REQUIREMENTS: 124

ASSOCIATE OF ARTS DEGREE (Major in Business)

The Associate of Arts Degree in Business is designed to be a two-year curriculum with these objectives:

1. To provide business occupational education with the opportunity for specialization in accounting.
2. To enable the student to enter accounting positions in business and government.
3. To enable the student to upgrade his/her skills and knowledge to qualify for higher positions in business and government.

ASSOCIATE OF ARTS in BUSINESS

GENERAL EDUCATION: According to the following specifications: 16
English: EN101, EN102
Social Science: EC101 or EC121, PC101
Social Science or Humanities elective: 3 sh additional

MAJOR: Business (Associate) Core 32
Required courses:
(Punxsutawney Campus only)

BE111	Foundations of Business Math	3 sh
BE131	Principles of Typewriting	2 sh
AD101	Business Organization and Management	3 sh
AD235	Introduction to Business Law	3 sh
AD221	Business Technical Writing	3 sh
BE250	Electronic Office Procedures	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
F1220	Essentials of Finance	3 sh
IM241	Introduction to MIS	3 sh
IM245	Introduction to Microcomputers	3 sh

OTHER REQUIREMENTS: One Specialization 12
Accounting Specialization: (Punxsutawney Campus only)

AG301	Intermediate Accounting I	3 sh
AG302	Intermediate Accounting II	3 sh
AG311	Cost Accounting	3 sh
AD336	Law of Business Organizations	3 sh

Computer and Office Specialization: (Punxsutawney and Kittanning campus)
(Branch Campuses) 12

IM251	Business Systems Analysis and Design	3 sh
IM255	Business Applications in COBOL	3 sh
IM260	Business Computer Application Project	3 sh
AD273	Word Processing	3 sh

FREE ELECTIVE: 3

TOTAL DEGREE REQUIREMENTS: 63

FINANCE AND MANAGEMENT INFORMATION SYSTEMS DEPARTMENT

KENNETH SHILDT, CHAIRPERSON; ALBOHALI, BOLDIN, CHEN, HALAPIN, McCAFFREY, NAHOURAII, SOLAK, WALIA, WELKER

The finance major, leading to the degree of Bachelor of Science, is designed to educate those students who are interested in the financial management of the firm.

The objective of the finance area is to prepare students to deal with financial problem solving in the areas of financial management and investment analysis. Graduates should be knowledgeable of the basic theory of Finance so as to apply it to the rapidly changing field.

The management information systems area provides education in business computer technology and in the design and implementation of management information systems.

BACHELOR OF SCIENCE in FINANCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Mathematics: MA121
Social Science: EC121, PC101
Science/Math Elective: MA214

MAJOR: Business Administration Core 36

Required courses:

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Principles of Accounting I	3 sh
AG202	Principles of Accounting II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Intro to Management Info Systems	3 sh
FI310	Finance I	3 sh
QB360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MG495	Business Policy	3 sh
MK320	Principles of Marketing	3 sh

OTHER REQUIREMENTS: Finance 27

Required Courses:

EC325	Monetary Economics I	3 sh
FI320	Finance II	3 sh
FI322	Life Insurance	3 sh
FI324	Principles of Investments	3 sh
FI420	Investment Analysis	3 sh
FI422	Seminar in Finance	3 sh

Controlled Electives: three courses from the following: 9 sh
AG421, FI312, QB380, FI385, FI410, Approved upper level EC courses

FREE ELECTIVES: 8

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE in MANAGEMENT INFORMATION SYSTEMS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA121
Social Science: EC121, PC101
Science/Math Elective: MA214

MAJOR: Business Administration Core **36**

Required courses:

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Principles of Accounting I	3 sh
AG202	Principles of Accounting II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Intro to Management Info Systems	3 sh
FI310	Finance I	3 sh
QB360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MG495	Business Policy	3 sh
MK320	Marketing	3 sh

OTHER REQUIREMENTS: Management Information Systems **27**

Required Courses:

CO220	Applied Computer Programming	3 sh
IM350	Business Systems Technology	3 sh
IM370	Advanced COBOL Application Programming	3 sh
IM450	Data Base Theory and Application	3 sh
IM451	Systems Analysis	3 sh
IM470	Systems Design	3 sh

Controlled Electives:

At least one course from list: CO110, 250, 300, 310, 320, 345, 370	3 sh
Two courses from list: QB380, IM382, IM480, or IM481, or above CO courses	6 sh(1)

FREE ELECTIVES: **8**

(1) One course from AG300, AG301 or AG311 may be substituted.

TOTAL DEGREE REQUIREMENTS: 124

MANAGEMENT AND MARKETING DEPARTMENT

THOMAS W. FALCONE, CHAIRPERSON; ANDERSON, BASSIRY, BATRA, CHAUBEY, KRISHNAN, McAFOOSE, MOTAMENI, PILLION, RYAN, STEVENSON, TAIANI, WEIERS

Graduates holding the Bachelor of Science degree with majors in Management or Marketing find employment opportunities in both the public and private sectors. In the first half of the 1980s, opportunities seem to have been especially plentiful in the services sector (e.g., retailing, government, food services, financial, and transportation).

The Marketing program is designed to offer its majors solid grounding for entry into either line or staff marketing positions. Line positions are the most common and typically involve personal selling positions with either goods producers, services producers, or goods distributors (wholesalers and retailers). The graduate who is additionally qualified by exceptional experience or training may succeed in entering directly into upper line marketing management in a brand- or product-manager position. Staff positions might include marketing research, advertising and public relations, or customer services.

The Management program offers two more structured majors: one in Human Resources Management, the other in Industrial Management. Human Resources Management majors are well grounded in both the general/theoretical and specific/applied aspects of the work done in personnel departments, labor relations, or human resources management. Industrial Management majors are similarly well grounded in both management applications and theory, but their focus is more upon production/operations/industrial management.

A third Management program, General Management, is distinguished from the other two by its lower degree of structure or specificity. The greater flexibility of this major can be useful to the student who wishes to build a customized management specialization (e.g., fine arts management). The lack of specialization might also be desirable for graduates who will be working in small businesses where the manager often must wear several hats.

The Management and Marketing Department also supplies the faculty to meet the related needs and requirements of the Master of Business Administration (MBA) degree program.

BACHELOR OF SCIENCE in MANAGEMENT

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA121
Social Science: EC121, PC101
Science/Math Elective: MA214

MAJOR: Business Administration Core 36

Required courses:

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Principles of Accounting I	3 sh
AG202	Principles of Accounting II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Intro to Management Info Systems	3 sh
FI310	Finance I	3 sh
QB/MG360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MG495	Business Policy	3 sh
MK320	Marketing	3 sh

OTHER REQUIREMENTS: ONE CONCENTRATION 27

Human Resources Management Concentration

Required Courses:

AG300	Managerial Accounting	3 sh(1)
MG300	Human Resources Management	3 sh
MG390	Principles and Practices of Management	3 sh
MG400	Wage and Salary Administration	3 sh
MG401	Management Development and Training	3 sh
MG402	Seminar in Human Resource Management	3 sh

Controlled Electives:

One course from list: EC330 or PC420	3 sh
Three courses from list:	9 sh(3)
EC371, EC372, EC373, EN310, EN312, JN326, LR426, LR480, MG410, MG493 3 sh max), PC330, PC371, PC420 (if not above), SO340	

Industrial Management Concentration

Required Courses:

AG300	Managerial Accounting	3 sh(1)
MG300	Human Resources Management	3 sh
MG390	Principles and Practices of Management	3 sh

Controlled Electives:

One course from list: C0110 or FS351	3 sh
Two courses from two areas on list: MG402 or LR480, MG401 or MG400, AG311 (1)	6 sh
Three courses from list or additional electives from above: AD336, EC371, EC372, EN310 or JN326, FI320, QB380, MA317, MG410, MG481, MG490, MG493 (3 sh max), MK420, SA101.	9 sh

General Management Concentration

Required Courses:

AG300	Managerial Accounting	3 sh(1)
MG300	Human Resource Management	3 sh
MG390	Principles and Practices of Management	3 sh

Controlled Electives:

Two Advanced Business electives: 300/400 level courses	6 sh(2)
Two Advanced Economics electives: 300/400 level courses	6 sh
Two other advanced electives: 300/400 level courses	6 sh

FREE ELECTIVES: 8

TOTAL DEGREE REQUIREMENTS: 124

(1) AG301: Intermediate Accounting I may be substituted to use as prerequisite for AG311: Cost Accounting.
(2) Only one MG and/or one AG course may be included in this category.
(3) Note prerequisites for controlled electives in planning sequence.

BACHELOR OF SCIENCE in MARKETING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA121
Social Science: EC121, PC101
Science/Math Elective: MA214

MAJOR: Business Administration Core 36

Required courses:

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Principles of Accounting I	3 sh
AG202	Principles of Accounting II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Intro to Management Info Systems	3 sh
FI310	Finance I	3 sh
QB/MG360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MG495	Business Policy	3 sh
MK320	Marketing	3 sh

OTHER REQUIREMENTS: Marketing 27

Required Courses:

AG300	Managerial Accounting	3 sh
MK321	Consumer Behavior	3 sh
MK420	Marketing Management	3 sh
MK421	Marketing Research	3 sh
MK422	Seminar in Marketing	3 sh
EC—	Advanced Economics Elective: 300/400 level courses	3 sh

Controlled Electives:

Three courses from list: 9 sh
DE332, DE333, EC331, EC345, MK430, MK431, MK432, MK433, MK493 (3 sh max)

FREE ELECTIVES: 8

TOTAL DEGREE REQUIREMENTS: 124

PRE-LAW MINOR IN COLLEGE OF BUSINESS

The pre-law minor is intended for the student who is a business major concentrating in one of the business areas and interested in law as a career. The minor consists of twenty-one semester hours selected by the students from a predetermined list of courses spread over five areas of Humanities and Social Sciences. The goals of the pre-law minor are academic accomplishment, guidance, and advisement. Interested business students should contact the pre-law adviser in the Administrative Services and Business Education Department.

BACHELOR OF SCIENCE /Pre-Law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA121
Social Science: EC121, PC101
Science/Math electives: MA214

MAJOR:

Required courses: Business Administration Core **36**

AD235	Introduction to Business Law	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
MG495	Business Policy	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Introduction to MIS	3 sh
FI310	Finance	3 sh
QB/MG360	Management and Production Concepts	3 sh
MG311	Human Behavior in Organizations	3 sh
MG495	Business Policy	3 sh
MK320	Marketing	3 sh

OTHER REQUIREMENTS: One Major in Business Administration Areas **27**

Accounting Major
Finance Major
Management Major/Human Resources Management Track
Management Major/Industrial Management Track
Management Major/General Management Track
Management Information Systems Major
Marketing Major

FREE ELECTIVES: Pre-Law Interdisciplinary Minor **(21) 9**

At least one course from six areas
Criminology: CR101, CR210, CR260
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH327
Political Science: PS358, PS359, PS361

TOTAL DEGREE REQUIREMENTS: 125

BUSINESS MINORS IN THE COLLEGE OF BUSINESS

Minors in Accounting, Finance, Human Resources Management, Management, Management Information Systems, and Marketing are offered only for students who are majoring in one of the other majors in the College of Business and assume the common thirty-six-credit Business core. Minors in the College of Business are not routinely open to majors in other colleges.

The College of Education

CHARLES W. RYAN, DEAN; JOHN W. BUTZOW, ASSOCIATE DEAN; LARRY A. VOLD, ASSISTANT DEAN

The departments of the College of Education offer programs leading to the degree of Bachelor of Science, the degree of Bachelor of Science in Education, the degree of Master of Arts, the degree of Master of Education, the degree of Master of Science, and doctoral programs leading to the degrees of Doctor of Education in Elementary Education, Doctor of Education in Counselor Education, and Doctor of Education in School Psychology. Appropriately, all teacher education and public education professional programs completed in the College of Education lead to certification for public school teaching or supervision in the Commonwealth of Pennsylvania.

The programs in teacher preparation at IUP enable the educator to become responsible for the planning, organization, and evaluation of an instructional program within the framework of a school setting. The teacher brings to this setting a broad background of general studies, an acceptable degree of mastery in a specialized field, and an understanding of the processes of human growth and learning. In this role the teacher creates, manages, and maintains an educational environment appropriate to the needs of the students to be served. The teacher uses social, physical, cognitive, and psychological data available on the individual student to plan, execute, and evaluate the instructional program. The teacher assumes a high degree of personal and professional responsibility in developing a philosophy of education in the development and management of a plan for professional growth. In support of this effort the college prepares school counselors, school psychologists, elementary and secondary principals, and specialists in Communications Media, Early Childhood, and Special Education.

The program of teacher preparation will provide an opportunity to gain expertise in the following generic competencies:

1. An understanding of the theoretical and practical aspects of human growth and development.

2. Knowledge of and experience with effective teaching-learning techniques.

3. Utilization of learning resources and evaluation of teaching and learning effectively.

4. Effective classroom management techniques and recognition and response to differing behavioral patterns.

5. An understanding of the historical and philosophical bases of American education and a belief that professional development is a lifelong process.

SUMMARY OF CERTIFICATION PROGRAMS OFFERED

Early Childhood Education	Bachelor of Science in Education
Elementary Education	Bachelor of Science in Education Master of Education Doctor of Education
Secondary Education	
English	Bachelor of Science in Education
Communication	Master of Education
Biology	
Chemistry	
Earth and Space Science	
General Science	
Mathematics	
Physics	
Comprehensive Social Studies	
French	
German	
Spanish	
Art Education	For details see College of Fine Arts
Business Education	For details see College of Business
Home Economics Education	For details see College of Human Ecology and Health Sciences
Music Education	For details see College of Fine Arts
Health and Physical Education	For details see College of Human Ecology and Health Sciences
Special Education	
Education of Mentally/Physically Handicapped	Bachelor of Science in Education Master of Education
Hearing Impaired	Master of Science
Rehabilitation Education	Bachelor of Science in Education
Speech Pathology and Audiology	Bachelor of Science Bachelor of Science in Education Master of Education Master of Science
Communications Media	Bachelor of Science
Vocational Education	Bachelor of Science in Education

Graduate Programs (see Graduate Bulletin)	
Adult/Community Education	Master of Arts
Counselor Education	Master of Education
Educational Psychology	Master of Education
Communications Media	Master of Education
Reading Specialist	Master of Education
Student Personnel Services	Master of Arts
Certification (see Graduate Bulletin)	
Guidance Supervisor	Instructional Media Specialist
Reading Specialist	Elementary Secondary Principals
Reading Supervisor	Special Education Supervisor
School Psychologist	

DEGREE REQUIREMENTS

All degree candidates in the College of Education (except for three special programs) must complete satisfactorily a minimum of 124 semester hours in three categories: General Education, a specialized major field, and professional education. Students entering in the fall of 1987 may be required to complete additional and/or modified requirements in professional education. Major requirements in Education of Exceptional Persons, Elementary Education, Early Childhood Education, and Secondary Education are also under study and are expected to change as part of a college-wide revision of teacher education programs. Check with assigned adviser about changes.

General Education - 52-55 semester hours,
described under Requirements for Graduation.

Specialized major field - requirements listed under Department offerings.

Professional Education - 30 semester hours, as follows:

EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurements	3 sh
FE302	History and Philosophy of Education	3 sh
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching Experience I	1 sh
ED342	Pre-student Teaching Experience II	1 sh
ED442	School Law	1 sh
Methods Course - (Teaching of ----------		3 sh
One semester student teaching		12 sh

SOPHOMORE SCREENING FOR JUNIOR STANDING

College of Education majors are screened at the end of the sophomore year for Junior Standing approval. The student must have earned a minimum of 57 semester hours, achieved a 2.0 cumulative quality-point average, successfully completed English I and English II with a minimum quality-point average of 2.0 and received speech clearance and department approval.

STUDENT TEACHING

Student teaching is designed to be a learning experience for our teacher interns. The student teacher intern is learning to teach under the supervision of a full-time master teacher in an off-campus center. A university supervisor is assigned to work with individual student teachers and cooperating master teachers. To gain admission to student teaching, applicants must have achieved a minimum quality-point average of 2.5 in both their subject area or major and in all professional education courses.

CERTIFICATION

Applicants who have received a quality-point average of at least 2.0 in all subject area or major professional education courses, have a cumulative quality-point average of at least 2.5 in their subject area or major and professional education courses, and have met all other program requirements will be recommended for certification in their respective areas.

COMMONWEALTH REQUIREMENTS FOR TEACHER CERTIFICATION

(except Vocational Instructional Certification. See section on Vocational Personnel Preparation.)

Certification standards for commonwealth public school teachers are established by the Department of Education and the State Board of Education. The chairperson of the department in which the student is majoring must verify to the dean of the College of Education that all qualifications are met. The dean of the college is authorized to determine final approval for certification.

Applicants for certification are required by state law to be of good mental and physical health and not addicted to narcotic drugs in any form.

The Instructional I certificate is issued to the beginning teacher upon graduation from the College of Education. Commencing June 1, 1987, all candidates for the Instructional I certificate must successfully pass the Pennsylvania Teacher Certification test. IUP is a designated test site. Contact the Professional Laboratory Experiences office for information. With the completion of an additional twenty-four semester hours of collegiate and/or inservice courses and successful teaching experience, students may acquire the Instructional II certificate leading to permanent certification to teach in the Commonwealth of Pennsylvania.

THE UNIVERSITY CLINICS

Three clinics/centers under the supervision of the College of Education offer diagnostic testing and remedial service and instruction in the following areas:

SPEECH AND HEARING CLINIC - diagnosis of speech problems, hearing tests and evaluations, and a regular program of therapy. Regularly enrolled students at the university may avail themselves of these services without charge.

THE CHILD STUDY CENTER provides psychological assessment and parent consultation for children and adolescents with learning and/or behavior problems.

CENTER FOR EDUCATIONAL STUDIES

The center provides opportunity for innovative research and development activity in the college. Educational experimentations and faculty research opportunities provide opportunity for the latest educational theories and processes to be tested.

GRADUATE PROGRAMS

Information descriptive of M.Ed., Ed.D., and Teaching Internship programs may be found in the current issue of the Graduate School catalog.

THE UNIVERSITY SCHOOL

WARNER E. TOBIN, CHAIRPERSON/DIRECTOR; GERLACH, JOHNSON, MARLIN, WALTHOUR

The University School provides a program of instruction from kindergarten through sixth grade. The University School provides professional laboratory experiences and research activities for faculty and students. Research and experimental activities are scheduled with the director of the University School. In sum, University School provides IUP students a unique opportunity to observe the most advanced learning styles and demonstrations for teaching in the year 2000.

CENTER FOR VOCATIONAL PFRSONNEL PREPARATION

Thomas W. O'Brien, Director

VOCATIONAL-TECHNICAL PROFESSIONAL STUDIES

MICHAEL A. SPEWOCK, CHAIRPERSON; BICANICH, DOWNS, DOLECKI, DUNN, DURBIN, JOHNSON, KEITH, LAMPING, PELLATIRO, PENROSE, RANKIN, SILKMAN, SYLVES, WHISNER

The Vocational-Technical Professional studies program offers curriculums to prepare both preservice and inservice teachers, supervisors and administrators in vocational-technical areas for secondary schools, area vocational- technical schools, postsecondary schools including community colleges, and persons within industry serving as instructors and coordinators of training programs. The program serves both undergraduate and graduate students. For further information on graduate offerings, consult the graduate catalog.

The curriculum in the B.S. in Education degree program in vocational-technical education is designed to prepare teachers for secondary schools, area vocational-technical schools, postsecondary schools including community colleges, and within industry as instructors and coordinators of training programs. A student enrolling in the vocational education curriculum may specialize in areas related to interest and/or previous work experience. Graduates have a wide selection of employment opportunities because of a rapid growth in vocational/technical offerings in both the public and private sectors.

A program leading to certification as a secondary school vocational-technical teacher is also offered. Certification to teach vocational-technical education in the commonwealth's secondary schools is issued to individuals who meet statutory requirements, demonstrate occupational/technical proficiency on a nationally standardized occupational competency examination, and complete sixty semester credit hours of the Pennsylvania Department of Education-approved university program. In the IUP program a plan of studies will be tailored to each student's unique background (i.e., electrical, electronics, data processing, drafting, welding, dental, etc.) and professional needs.

Certification to serve as a cooperative education teacher-coordinator in the commonwealth's secondary schools can be earned by completing a program of studies. Tailored to each student's individual background and professional needs, the program prepares individuals for managing industrial cooperative training and school-to-work transitional experiences. For persons holding a valid Pennsylvania Instructional Certificate, the program of studies will be individualized based upon educational credits earned.

The degree program is 124 semester hours, the vocational technical education certificate program is 60-62 semester hours, and the cooperative education teacher/coordinator certificate program is 66-68 semester hours.

BACHELOR OF SCIENCE IN EDUCATION in VOCATIONAL-TECHNICAL EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			**52**
Social Science: HI104, PC101			
MAJOR:			**30**
Required courses:			
VO100	Preparation of the Vocational Professional I	15 sh	
VO400	Preparation of the Vocational Professional II	15 sh	
OTHER REQUIREMENTS:			**33**
Vocational Technical Preparation			
VO450	Technical Preparation of the Vocational Professional	24 sh	
Professional Educational Sequence:			
EP302	Educational Psychology	3 sh	
FE302	History and Philosophy of Education	3 sh	
Other:			
EN310	Public Speaking	3 sh	
VO401	Special Topics in Vocational Technical Preparation	3-12 sh	
VO402	Special Topics in Vocational Pedagogical Preparation	3-15 sh	
Other as approved			
FREE ELECTIVES:			**9**
		TOTAL DEGREE REQUIREMENTS:	**124**

CERTIFICATE in VOCATIONAL-TECHNICAL EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications:		**24-26**
English: EN101, EN310	6-7 sh	
Fine Arts: AH101, MU101 or TH101	3 sh	
Humanities: Humanities elective	3 sh	
Mathematics: MA101	3 sh	

Natural Science: Laboratory science		3-4 sh	
Social Science: PC101, HI104 (recommended)		6 sh	
MAJOR:			30
Required courses:			
VO100	Preparation of the Vocational Professional I	15 sh	
VO400	Preparation of the Vocational Professional II	15 sh	
OTHER REQUIREMENTS:			6
Professional Education			
EP302	Educational Psychology	3 sh	
FE302	History and Philosophy of Education	3 sh	
FREE ELECTIVES:			0
		TOTAL CERTIFICATION REQUIREMENTS:	60-62

CERTIFICATE as SECONDARY SCHOOL COOPERATIVE EDUCATION TEACHER/COORDINATOR

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			24-26
English: EN101, EN310		6-7 sh	
Fine Arts: AH101, MU101, or TH101		3 sh	
Humanities: Humanities elective		3 sh	
Mathematics: MA101		3 sh	
Natural Science: Laboratory Science		3-4 sh	
Social Science: PC101, HI104 (recommended)		6 sh	
MAJOR:			36
Required courses:			
VO100	Preparation of the Vocational Professional I	9 sh	
VO400	Preparation of the Vocational Professional II	9 sh	
VO402	Special Topics in Vocational Pedagogical Prep	15 sh	
VO450	Technical Prep of the Vocational Professional	3 sh	
OTHER REQUIREMENTS: Professional Education			6
EP302	Educational Psychology	3 sh	
FE302	History and Philosophy of Education	3 sh	
FREE ELECTIVES:			0
		TOTAL CERTIFICATION REQUIREMENTS:	66-68

COMMUNICATIONS MEDIA DEPARTMENT

KURT P. DUDT, CHAIRPERSON; AUSEL, HANDLER, JULIETTE, LAMBERSKI, LEIDMAN, YOUNG

The department offers a Bachelor of Science in Communications Media, a minor in Communications Media, and a minor in Educational Technology. The department also serves preservice teachers and other students who are required to complete the basic course in Instructional Media, CM 301.

The philosophy of the Communications Media-Department is to prepare generalists in the area of Communications. Our students can choose from one of three tracks within the department, depending on their career interests: Product Development, Electronic Media, or Training and Development. Regardless of the sequence chosen, students may select courses outside of their sequence in order to broaden their skills.

The faculty within the department offer a wide variety of experience in all areas of Communications Media. With the combination of classroom work and the optional internship program, departmental graduates are competitive for positions in various areas. Students graduating from this major have ohtained positions in such areas as radio, television, cable television, public relations, advertising agencies, medical media centers, and corporate media centers.

The department offers two minors, one in Communications Media and one in Educational Technology. The minor in Communications Media is an eighteen-credit program designed to complement any major. Survey of Communications plus fifteen credits of Communications Media electives are required.

The minor in Educational Technology is designed for students in the College of Education who are completing a teaching degree. This minor includes as required courses Survey of Communications, Alternative Systems of Communication, and Introduction to Computers plus fifteen additional credits of Communications Media electives.

Students changing majors from other academic departments within the university are required to have a 2.5 grade-point average before transfer will be approved.

BACHELOR OF SCIENCE in COMMUNICATIONS MEDIA

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Natural Science: SC105-106 or BI103-104
Social Science: PC101
Science/Math elective: CO200

MAJOR:			42-45
Required courses:			
CM101	Survey of Communications Media	3 sh	
CM102	Basic Technology	1 sh	
CM103	Basic Communications Research	1 sh	
CM200	Images	3 sh	
CM395	Career Planning in Communication	1 sh	
Controlled electives: According to Track			
Product Development: CM303 (required), CM271, 440, 444, 449, 451 (strongly recommended), CM441, 472, 473, 474, 476, 477, 475, 478, 445, 450, 480, 390, 490 (also recommended).		33 sh	
Electronic Media: CM 404, 403 (required), CM 405, 451, 460 (strongly recommended), CM 452, 453, 454, 456, 480, 455, 390, 490 (also recommended)		36 sh	
Training and Development: CM330, 335(required), CM271, 303, 403, 404, 430, 435, 440, 449, 451, 461(strongly recommended), CM390, 480, 490, 495(also recommended)		36 sh	
OTHER REQUIREMENTS:			21-18
College of Education Requirement: EP302 or EP388		3 sh	
Out-of-College Requirement(adviser approval) by Track			
Product Development Track		18 sh	
Electronic Media Track		15 sh	
Training and Development Track		15 sh	
FREE ELECTIVES:			9

TOTAL DEGREE REQUIREMENTS: 124

COUNSELOR EDUCATION DEPARTMENT

JOHN C. WORZBYT, CHAIRPERSON; CULP, JACKSON, MAHLER

The undergraduate courses offered by the Counselor Education Department are available as electives for undergraduates who wish to increase their interpersonal relationship skills and for school personnel seeking a broad understanding of helping roles in the school setting.

The Adult/Community Education Program, which also offers a graduate degree, is a part of this department.

EDUCATIONAL PSYCHOLOGY DEPARTMENT

ROBERT H. HOELLEIN, CHAIRPERSON; BARKER, DeFABO, LEVINSON, QUIRK, RATTAN, YANUZZI

The department services undergraduate and graduate students. Undergraduate students may declare a minor in Educational Psychology or the teaching of sex education by making application to the department chairperson. Fifteen semester hours from the courses described below are required for the minor in educational psychology.

The department also offers the M.Ed. with emphasis in Educational Psychology, School Psychology, and Research. There is also a post-master's certification and a Doctor of Education in School Psychology. Refer to the current Graduate School catalog for details.

FOUNDATIONS OF EDUCATION DEPARTMENT

DAVID E. ROTIGEL, CHAIRPERSON; MERRYMAN, PENTA, THIBADEAU

Graduate courses offered by this department include Comparative, Historical, Philosophical, and Social Foundations of Education; Curriculum Development; Professional Negotiations in Education; and International Education Studies Program. For specific information concerning these courses, see the current edition of the Graduate School catalog.

PROFESSIONAL STUDIES IN EDUCATION DEPARTMENT

EDWINA B. VOLD, CHAIRPERSON; BEIGER, CORBETT, DeCICCO, DORSEY, ELLIOTT, JALONGO, KING, McFEELY, MIKKELSEN, MILLWARD, MOTT, REILLY, RIZZO, ROBINSON, WILLIAMS, WILLIS

The Elementary Education program is designed to provide learning experiences which will assist students in developing into highly competent and effective teachers. All Elementary Education majors are provided with opportunities to work with children beginning with their freshman year.

Effective Fall, 1983: A 2.5 QPA is required in major courses in order to student teach.

Early Childhood Education Program

The Early Childhood Education Program prepares students to select from among a variety of techniques and strategies those which appropriately expand children's cognitive, social, emotional, and physical development. Through lectures, research, and on-site experiences with young children, students are able to expand their own knowledge of and attitudes toward education of young children N-3rd grade.

Graduate Programs

Programs leading to the M.Ed. and Ed.D degrees are described in the current issue of the Graduate School catalog. Internships and assistantships are available.

BACHELOR OF SCIENCE IN EDUCATION in ELEMENTARY EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Mathematics: MA151
Natural Science: SC105-106
Social Science: GE101, HI104, PC101
Science/Math Electives: MA152

MAJOR:			33
Required courses:			
EL211	Music for the Elementary Grades	2 sh	
EL213	Art for the Elementary Grades	2 sh	
EL215	Child Development	3 sh	
EL221	Children's Literature	3 sh	
EL222	Teaching of Reading I	3 sh	
EL312	Teaching of Elementary Science	3 sh	
EL313	Teaching Mathematics in the Elementary School	3 sh	
EL314	Teaching of Health and Physical Education	2 sh	
EL322	Teaching of Reading II	3 sh	
EL411	Teaching of Social Studies	3 sh	
EL413	Teaching Language Arts	3 sh	
EL461	Organization of the Elementary School and Curriculum	3 sh	
OTHER REQUIREMENTS:			33
Science: BI311 Environmental Biology		4 sh	
Professional Education Sequence (1)			
CM301	Instructional Media	3 sh	
ED242	Pre-student Teaching I	1 sh	
ED342	Pre-student Teaching II	1 sh	
ED441	Student Teaching	12 sh	
ED423	Practicum and School Law	3 sh	
EP302	Educational Psychology	3 sh	
EP377	Educational Test and Measurement	3 sh	
FE302	History and Philosophy of Education	3 sh	
FREE ELECTIVES:			12
		TOTAL DEGREE REQUIREMENTS:	130

(1) Requirement revisions pending.

BACHELOR OF SCIENCE IN EDUCATION in EARLY CHILDHOOD EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Mathematics: MA151
Natural Sciences: SC105-106
Social Science: GE101, HI104, PC101

MAJOR:			39
Required courses: (1)			
EE220	Language and Literature	3 sh	
EE310	Integrated Curriculum I	3 sh	
EE311	Integrated Curriculum II	3 sh	
EE312	Aesthetic Experiences for Young Children	3 sh	
EE315	Play as Cognitive and Affective Development	3 sh	
EE413	Hospitalized Child	3 sh	
EL215	Child Development	3 sh	
EL353	Preschool Education	3 sh	
EL451	Teaching Primary Reading	3 sh	
EX300	Education of the Exceptional Child	3 sh	
EX464	Preschool Education of the Handicapped	3 sh	
HE426	Techniques of Parent Education	3 sh	
MA450	Preschool and Primary Math	3 sh	

OTHER REQUIREMENTS: 27

Professional Education Sequence (1)

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	Practicum and School Law	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Test and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 6

TOTAL DEGREE REQUIREMENTS: 126

(1) Requirement revisions pending.

SPECIAL EDUCATION AND CLINICAL SERVICES

LAWRENCE J. TURTON, CHAIRPERSON; M. BAHN, W. BAHN, BENCH, BORMANN, CHAPMAN, CRONK, FIDDLER, MEASE, MUNRO, NEWELL, NOWELL, REBER, SHANE, VICKERS, YAGEL

This department offers the degree of Bachelor of Science in Education in any one of four majors. Each of the four majors follows a prescribed sequence of courses. Students may elect to major in any one of the following fields:

A. Education of Mentally/Physically Handicapped
B. Speech Pathology and Audiology
C. Rehabilitation
D. Education of Hearing Impaired

The following grade policy applies to all four undergraduate programs of study in the Department of Special Education and Clinical Services. Individual students may appeal any aspect of the policy by making a formal written request to the Departmental Appeals Committee.

1. No more than one "D" in major courses will be accepted toward graduation and certification.
2. No "D" is permitted as the final recorded grade in any of the following courses.
   - ED421: Student Teaching
   - ED441: Student Teaching
   - EH308: Language for the Hearing Impaired
   - EX450: Methods and Curricular Planning for Mildly and Moderately Handicapped
   - RH322: Rehabilitation Case Study and Interpretation
   - RH421: Field Training in Rehabilitation
   - RH441: Field Training in Rehabilitation
   - SH122: Phonetics
   - SH320: Speech Clinic

A. EDUCATION OF MENTALLY/PHYSICALLY HANDICAPPED

Completion of the sequence of study in this major leads to Pennsylvania Department of Education comprehensive certification as a teacher of the mentally and/or physically handicapped. Students will be prepared to teach mentally retarded, physically handicapped, emotionally disturbed, socially maladjusted, learning disabled, and neurologically impaired. This program also provides an opportunity for students to seek career opportunities in the areas of welfare and mental health and with private agencies. Student teaching experiences are provided with the mentally retarded and one of the other handicaps. The program also provides a foundation for pursuing additional work at the graduate level.

BACHELOR OF SCIENCE IN EDUCATION in EDUCATION OF MENTALLY AND/OR PHYSICALLY HANDICAPPED

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Mathematics: MA151
Social Science: HI104, PC101

MAJOR: 45

Required courses:

EX120	Introduction to Exceptional Persons	3 sh
EX220	Typical and Atypical Growth and Development	3 sh
EX240	Teaching Math for the Mentally and Physically Handicapped	3 sh
EX251	Methods of Teaching Reading	3 sh
EX341	Educating Socially and Emotionally Maladjusted	3 sh
EX343	Content Subject Areas for Mentally and/or Physically Handicapped	3 sh
EX353	Reading and Other Language Arts for Mentally and/or Physically Handicapped	3 sh 3 sh
EX370	Assessment of the Mentally and/or Physically Handicapped	3 sh
EX430	Physical Disabilities and Psychological Handicaps	3 sh
EX450	Methods and Curriculum Planning for the Mildly and Moderately Handicapped	3 sh
EX454	The Brain Injured and the Learning Disabled	3 sh
EX457	Severe/Profound Retardation and Multiple Disabilities	3 sh
EX409	Ethical and Professional Behavior	1 sh
SH254	Classroom Management of Language Disorders	3 sh
HP372	Health and Physical Education for Special Populations	2 sh

Controlled electives:
One course from list: AT330 or MU335 — 3 sh

OTHER REQUIREMENTS: 27

Professional Education Sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED421	Student Teaching of the Mentally Handicapped	6 sh
ED441	Student Teaching of the Physically Handicapped	6 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh

EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 0

TOTAL DEGREE REQUIREMENTS: 124

B. SPEECH PATHOLOGY AND AUDIOLOGY

Completion of the sequence of courses in Speech Pathology and Audiology prepares a person for an Instructional I Teaching Certificate in Language Impaired from the Pennsylvania Department of Education. The undergraduate program also serves as a preprofessional program for those students who wish to pursue a graduate degree and the Certificate of Clinical Competence from the American Speech-Language-Hearing Association. The undergraduate degree and the Level I Certificate permit the student to work in school environments, including local districts, nonpublic programs, and intermediate units.

Other work environments such as hospitals, community clinics, public health programs, and rehabilitation settings tend to require the Certificate of Clinical Competence from the American Speech-Lanquage-Hearing Association. Students are encouraged to consider pursuing a master's degree upon graduation.

The University Speech and Hearing Clinic serves as the laboratory for the undergraduate clinical practicum required as a prerequisite for student teaching. Prior to the registration for the clinical practicum course (SH 320), the student must complete the following hours of observation through enrollment in ED 242:

A. 30 hours of observation in Speech-Language Pathology
   1. 25 hours must be with a speech clinician who holds the Certificate of Clinical Competence in Speech.
   2. The majority of the hours must be in school settings; however, some of the hours may be in nonschool environments.

B. 25 hours of classroom observation
   1. Ten hours in regular education classrooms, K-12
   2. Ten hours in special education classrooms
   3. Five hours in community facilities such as preschools, sheltered workshops, etc. Services in this category should be of a noneducational, nonspeech pathology type.

Upon completion of the observation (ED 242) and practicum (SH 320) requirements, the student is placed in a school environment for the one-semester student teaching experience.

BACHELOR OF SCIENCE IN EDUCATION in SPEECH PATHOLOGY AND AUDIOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Mathematics: MA217 recommended
Social Science: HI104, PC101

MAJOR: 42
Required courses:

EX362	Psychology of Reading in Language Processing	3 sh
SH111	Fundamentals of Speech and Hearing	3 sh
SH122	Phonetics	3 sh
SH222	Introduction to Audiology	3 sh
SH234	Language Development	3 sh

SH242	Introduction to Speech Science	3 sh
SH251	Anatomy and Physiology of the Speech and Hearing Mechanism	3 sh
SH306	Articulation and Language Disorders	3 sh
SH308	Stuttering and Voice Disorders	3 sh
SH311	Aural Rehabilitation	3 sh
SH314	Assessment of Speech and Language Disorders	3 sh
SH320	Speech Clinic	3 sh
Controlled electives:		
One course from list: EL215, EN331, EX220, PC310, PC311		3 sh
One course from list: EX120 or EX300		3 sh

OTHER REQUIREMENTS:

Professional Education Sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh(1)
FE302	History and Philosophy of Education	3 sh
SH312	Organization and Administration of Speech and Hearing Programs	3 sh

FREE ELECTIVES: 0

TOTAL DEGREE REQUIREMENTS: 124

(1) An option allows enrollment in MA217 for the required mathematics course or, if the student elects another mathematics course, to substitute MA217 for EP377. The student who enrolls in MA217 to fulfill the General Education requirement must register for MA417 or EP377.

C. REHABILITATION

Completion of this program leads to the Bachelor of Science in Education with a specialization in rehabilitation. The program is designed for students seeking career opportunities with health and welfare agencies and institutions and also provides a foundation for pursuing additional work at the graduate level.

BACHELOR OF SCIENCE IN EDUCATION in REHABILITATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA217
Natural Science: BI103-104
Social Science: HI104, PC101 and SO151 or SS101
Science/Math elective: BI151

MAJOR:			**45**
Required courses:			
RH200	Intro to Rehabilitation	3 sh	
RH220	Neurological Basis of Disability	3 sh	
RH311	Rehabilitation of the Blind and of the Deaf	3 sh	
RH312	Psychological Basis of Disability	3 sh	
RH321	Principles and Methods of Rehabilitation	3 sh	
RH322	Rehabilitation Case Study and Interpretation	3 sh	
RH360	Rehabilitation Counseling: Strategies	3 sh	
RH411	Rehabilitation of the Post-Surgical Patient	3 sh	
RH412	Occupational Aspects of Rehabilitation	3 sh	
RH421	Field Training in Rehabilitation	6 sh	
RH441	Field Training in Rehabilitation	6 sh	
RH422	Rehabilitation Practicum	2 sh	
RH460	Advanced Rehabilitation Counseling	3 sh	
RH484	Directed Rehabilitation Activities	1 sh	
OTHER REQUIREMENTS:			**13**
EX120	Introduction to Exceptional Persons	3 sh	
EX370	Assessment of the Mentally and Physically Handicapped	3 sh	
PC322	Intro to Psychological Measurement	3 sh	
PC321	Abnormal Psychology	3 sh	
FREE ELECTIVES:			**14**
		TOTAL DEGREE REQUIREMENTS:	**124**

D. EDUCATION OF HEARING IMPAIRED

Completion of the sequence of courses in Education of Hearing Impaired leads to a Bachelor of Science Degree in Education and Pennsylvania Department of Education certification as a teacher of the hearing impaired. Students are provided with the basic skills to teach in special classes for hard-of-hearing or deaf individuals.

Students enrolled in this sequence of study are prepared to assume positions as itinerant hearing therapists and classroom teachers for individuals ranging from preschoolers to adults. Work settings may include public schools, continuing education programs, and home training situations.

Observation, clinical experience, and practicum are required prior to placement in a school environment for the student teaching experience. The student will complete the following 50 hours of observation through enrollment in ED 242.

A. 20 hours of observation of itinerant and self-contained classrooms for the hearing impaired.
B. 10 hours of observation in regular education classrooms.
C. 15 hours of observation in special education classrooms.
D. 5 hours of observation in a noneducational setting.

The student will complete 25 hours of individual clinical experience through enrollment in ED 342 and 50 hours of school-based practicum through enrollment in EH330.

BACHELOR OF SCIENCE IN EDUCATION in EDUCATION OF HEARING IMPAIRED

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Mathematics: MA151
Social Science: HI104, PC101

MAJOR: 38

Required courses:

EH114	Introduction to Hearing Impaired	3 sh
EH115	Introduction to Sign Language	1 sh
EH244	Intermediate Sign Language	1 sh
EH307	Speech for the Hearing Impaired	3 sh
EH308	Language for Hearing Impaired	3 sh
EH330	Hearing Practicum	2 sh
EH331	Advanced Sign Language	1 sh
EH365	Parent-Preschool Programs for Hearing Impaired	3 sh
EX251	Methods of Teaching Reading	3 sh
SH222	Introduction to Audiology	3 sh
SH234	Language Development	3 sh
SH242	Introduction to Speech Science	3 sh
SH311	Aural Rehabilitation	3 sh

Controlled electives:

One course from: EX120 or EX300	3 sh
One course from: EX220 or EL215 or HE218	3 sh

OTHER REQUIREMENTS: 30

Professional Education Sequence

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching Clinical Experience I	1 sh
ED342	Pre-student Teaching Clinical Experience II	1 sh
ED421	Student Teaching-Hearing Impaired (Pri-Elem)	6 sh
ED441	Student Teaching-Hearing Impaired (Jr-Sr H.S.)	6 sh
ED442	School Law	1 sh
EH360	General Methodology for Education of Hearing Impaired	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurements	3 sh(1)
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 4

TOTAL DEGREE REQUIREMENTS: 124

(1) An option allows enrollment in MA217 for the required mathematics course or, if the student elects another mathematics course, substitution of MA217 for EP377. The student who enrolls in MA217 to fulfill the General Education requirement must register for MA417 or EP377.

The College of Fine Arts

DONALD G. EISEN, INTERIM DEAN

The College of Fine Arts has professional programs in art, music, and theater and awards the Bachelor of Arts and Bachelor of Fine Arts degrees. Programs leading to certification to teach are offered in cooperation with the College of Education and lead to the Bachelor of Science in Education degree.

There are four objectives for the College of Fine Arts: 1) to provide special academic programs for majors in the arts, 2) to provide service courses for other departmental majors, 3) to offer all university students general courses in the arts, and 4) to make cultural programs in the arts available to the university, the surrounding community, and the local region.

There are no additional college requirements for graduation beyond the university and departmental requirements listed in other sections of this catalog.

GENERAL FINE ARTS MAJOR

A general fine arts major program is available for those students desiring to take coursework in art, dance, interior design, media, music, and theater. This program is offered in conjunction with the College of Education and the College of Human Ecology and Health Sciences. This interdisciplinary program, including an opportunity for an internship (FA493), is coordinated through the Office of the Dean, College of Fine Arts, where additional information is available.

BACHELOR OF ARTS in GENERAL FINE ARTS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Fine Arts: AH101 or MU101 or TH101 depending on which arts areas are part of the major
- Health and Physical Education: Dance courses if dance is one of the selected areas
- Humanities: AH115, AH116 or MU301 if art or music are arts areas in major

MAJOR: 36
- Required courses:
  - Courses must come from three departments, one of which must be Art, Music, or Theater.
- Controlled electives:
  - Art: Art Education (AT), Art History (AH), Art Studio (AR)
  - Music: Music (MU) or Applied Music (AM)
  - Theater: Any Theater (TH) courses
  - Consumer Services: Interior Design courses (CS)
  - Communications Media: Any courses (CM)
  - Health and Physical Education: Dance (HP) courses

OTHER REQUIREMENTS: 0
- At least one-third (12) of the major credits must be in courses numbered in the 300 and 400s.

FREE ELECTIVES: 36

TOTAL DEGREE REQUIREMENTS: 124

DEPARTMENT OF ART

ANTHONY DeFURIO, CHAIRPERSON; ALI, BALSIGER, BATTAGLINI, BENZVI, BURWELL, CLAY, DROPCHO, HAMILTON, HEDMAN, INNES, JOHNSON, NESTOR, RUSSELL, J. SLENKER, R. SLENKER, WEILAND, WERT

Acceptance by the Department of Art as a major requires the submission of a portfolio and approval of the portfolio committee. Detailed information will be sent to the applicant upon request.

The Department of Art provides both general and special courses in art, directed toward the development of the student's creative and expressive abilities. Degrees offered are the Bachelor of Arts with tracks in either Art History or Art Studio, the Bachelor of Fine Arts in Art Studio, and the Bachelor of Science in Education in Art Education. The degree in art education provides certification for teaching art in grades K-12 in the schools of Pennsylvania.

The Department of Art offers a cooperative program with the Art Institute of Pittsburgh. Students interested in commercial art, with departmental approval, may earn credit toward their major at the Art Institute. A cooperative-program in metals is available at the Bowman Technical School, Lancaster, Pennsylvania.

All art majors are obligated to fulfill the university requirements for General Education. The Department of Art expects that art majors will maintain a 2.5 average in major courses, and this will be a prerequisite to student teaching.

A minor in art is available, consisting of at least 15 semester hours in art courses approved by the chairperson of the Department of Art.

BACHELOR OF ARTS in ART/History Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Fine Arts: MU101, or TH101
Humanities: May not use AH115, 116, 211, 222
Social Science: HI104, PC101 recommended

MAJOR: **51**
Required courses:

AH115	Ancient to Medieval Art	3 sh
AH116	Renaissance to Baroque Art	3 sh
AH211	Modern Art	3 sh
AH222	Art in America	3 sh
AH407	Medieval Art	3 sh
AH409	Baroque and Rococo Art	3 sh
AH416	Northern Renaissance Art	3 sh
AH419	Museology	3 sh
AR100	Arts of the 20th Century	3 sh
AR111	Drawing I	3 sh
AR112	Fundamentals of Drawing and Design	3 sh
AR113	Design I	3 sh
AR211	Painting I	3 sh
AR215	Sculpture I	3 sh
AR413	Senior Seminar	3 sh

Controlled electives:
Two courses from list: AH219, 406, 412, 418, 424, 426, 482 — 6 sh

FREE ELECTIVES: **21**

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in ART/Studio Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Fine Arts: MU101 or TH101
Humanities: AH115, AH116, AH211, or AH222

MAJOR: **45**
Required courses:

AR100	Arts of the 20th Century	3 sh
AR111	Drawing	3 sh
AR112	Fundamentals of Drawing and Design	3 sh
AR113	Design	3 sh
AR211	Painting	3 sh
AR215	Sculpture	3 sh
AR413	Senior Seminar	3 sh

Controlled electives:
Courses from list: AR213, 214, 216, 217, 218, 219, 321, 451, 452, 453, 454, 455, 457, 459, 460, 481, 482 — 24 sh(1)

FREE ELECTIVES: See note (2) **27**

TOTAL DEGREE REQUIREMENTS: 124

(1) Any combination of courses with no more than 3 credits per semester in any single studio area. Successful completion of introductory studio area is prerequisite to each advanced studio area.
(2) Department suggests some additional credit from AR321, 451, 452, 453, 454, 455, 457, 459, and 460 among student's electives.

BACHELOR OF FINE ARTS in ART STUDIO

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: AH115, AH116, AH211, or AH222

MAJOR 30

Required courses:

AR100	Arts of the 20th Century	3 sh
AR111	Drawing	3 sh
AR112	Fundamentals of Drawing and Design	3 sh
AR113	Design	3 sh
AR211	Painting	3 sh
AR215	Sculpture	3 sh
AR413	Senior Seminar	3 sh

Controlled electives:
Three courses from list: 9 sh
AR213, 214, 216, 217, 218, 219

OTHER REQUIREMENTS: 42

Art Studio 30 sh(1)
Additional credits to complete a studio primary area major (18) and studio secondary area (12) and fulfill a total of 30 credits beyond those used in above major core:
AR321, 451, 452, 453, 454, 455, 457, 459, 460, 481, 482

Art Electives (Advanced) 12 sh
Four courses from: AR321, 451, 452, 453, 454, 4S5, 457, 459, 460

FREE ELECTIVES: 0

TOTAL DEGREE REQUIREMENTS: 124

(1) A student may take no more than 6 credits in one semester in a given advanced studio course, and only by instructor approval. A minimum of 12 credits in an advanced studio area constitutes a secondary area; a minimum of 18 credits in an advanced studio area constitutes a primary area.

BACHELOR OF SCIENCE IN EDUCATION in ART EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Fine Arts: MU101 or TH101
Humanities: AH115, AH116, AH211
Social Science: H1104, PC101

MAJOR:			**39**
Required courses:			
AR100	Arts of the 20th Century	3 sh	
AR111	Drawing I	3 sh	
AR112	Fundamentals of Drawing and Design	3 sh	
AR113	Design I	3 sh	
AR211	Painting I	3 sh	
AR215	Sculpture I	3 sh	
AR413	Senior Seminar	3 sh	
Controlled electives:		9 sh	
Three courses from the following list: AR213, 214, 216, 217, 218, 219			
Three courses from the following list: AR213, 214, 216, 217, 218, 219, 321, 451, 452, 453, 454, 455, 457, 459, 460, 481, 482.		9 sh	
OTHER REQUIREMENTS:			**42**
Art Education Sequence			
AT315	Seminar in Art Education	3 sh	
AT316	Art Education Materials and Practicum	3 sh	
AT317	Art Education Methodology at the Elementary Level	3 sh	
AT318	Art Education Methodology at the Secondary Level	3 sh	
Professional Education Sequence			
CM301	Instructional Media	3 sh	
ED242	Pre-student Teaching I	1 sh	
ED342	Pre-student Teaching II	1 sh	
ED421	Student Teaching Elementary	6 sh	
ED441	Student Teaching Secondary	6 sh	
ED442	School Law	1 sh	
EP302	Educational Psychology	3 sh	
FE302	History and Philosophy of Education	3 sh	
Art Electives: Two courses from the list AH219, 222, 407, 408, 412, 419, AR321, 451, 452, 453, 454, 455, 457, 459, 460, AT330		6 sh	
FREE ELECTIVES:			**0**
		TOTAL DEGREE REQUIREMENTS:	**133**

(1) A student may take no more than 6 credits in one semester in a given advanced studio course and only by instructor approval. A minimum of 12 credits in a studio area constitutes a secondary area; a minimum of 18 credits in a studio area constitutes a primary area.

DEPARTMENT OF MUSIC

CALVIN E. WEBER, CHAIRPERSON; ADAMS, BECKER, BIRD, BORST, CASAVANT, DEARING, DeCESARE, DiCICCO, DIETZ, FRY, GODT, INTILI, JOHNSON, KAUFFMAN, KUEHN, LLOYD, LUCHSINGER, MALITSKY, MANTEL, MORRIS, OLMSTEAD, PERKINS, PERLONGO, SARTORI, SCANDRETT, STAPLES, TETI, THORELL, VANSTEENKIST, VOUKLIZAS

The Department of Music has a three-fold mission: (1) professional preparation of music educators and performers, (2) general education for the university, and (3) programs of music for the community. Degrees offered include the Bachelor of Arts, Bachelor of Fine Arts, and Bachelor of Science in Education.

Admission to the Music Department requires satisfactory completion of an audition in addition to the university general requirements. Detailed information will be sent to the applicant upon request.

A student wishing to minor in music must elect a minimum of fifteen semester hours in music courses as approved by the department chairperson.

The program leading to the Bachelor of Arts in music has been designed to give the student a general experience in music. The student seeking this degree has the choice of four tracks: Music History/Literature, Music Theory/Composition, Performance, and Jazz Studies.

The program leading to the Bachelor of Fine Arts in Music (equivalent to the Bachelor of Music Degree) is a special program with a major in one of twenty-one areas of performance. The student in this program prepares to pursue a career as a professional performing musician.

The program leading to the Bachelor of Science in Education with a music major leads to certification to teach in the schools of Pennsylvania.

Special Requirements

1. Each student must declare a primary performing medium. Those who elect voice as their primary instrument normally elect piano as a secondary instrument; those who elect piano as their primary instrument normally elect voice as their secondary instrument. Performance juries are held at the end of each semester.

   Students are expected to complete the requirements for their performing area and level. Piano proficiency is required in all degree programs.

2. Ensemble participation of five hours a week is required each semester.

3. Students must register for MU475 (Music Lab) and attend (1) all department and area recitals and (2) eight campus recitals and concerts each semester.

BACHELOR OF ARTS in MUSIC/History and Literature Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Fine Arts: MU101 (for majors)
- Humanities: MU301, 302, 303
- Mathematics: MA101 recommended

MAJOR: 35

Required courses:

MU111	Theory Skills I	2 sh
MU112	Theory Skills II	2 sh
MU115	Theory I	3 sh
MU116	Theory II	3 sh
MU211	Theory Skills III	2 sh
MU212	Theory Skills IV	2 sh
MU215	Theory III	3 sh
MU216	Theory IV	3 sh

Controlled electives: 15 sh

Five courses from this list: MU320, 321, 322, 323, 324, 325, 326, 420, 421

OTHER REQUIREMENTS: 15

Music Ensembles (MU120-136)	8 sh
Music Electives	7 sh
Jury Clearance in piano C	0 sh
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters)	0 sh

FREE ELECTIVES: 22

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in MUSIC/Jazz Studies Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: MU201, 202, 303
Mathematics: MA101 recommended

MAJOR: 50

Required courses:

MU111	Theory Skills I	2 sh
MU112	Theory Skills II	2 sh
MU115	Theory I	3 sh
MU116	Theory II	3 sh
MU213	Jazz Theory Skills I	2 sh
MU214	Jazz Theory Skills II	2 sh
MU222	Jazz Theory I	3 sh
MU223	Jazz Theory II	3 sh
MU224	Jazz Improvisation I	3 sh
MU225	Jazz Improvisation II	3 sh
MU311	Fundamentals of Conducting	2 sh
MU318	Jazz Orchestration I	3 sh
MU319	Jazz Orchestration II	3 sh

Controlled electives:

Applied Music I thru VIII:	16 sh
Private lessons in performance area- each of eight semesters	2 sh

OTHER REQUIREMENTS 8

MU135	Jazz Ensemble - 8 semesters	8 sh
Jury Clearance in major instrument, minor instrument (if any), and piano C.		0 sh
Attendence at 8 recitals per semester (MU475, S grade, 8 semesters)		0 sh

FREE ELECTIVES 14

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in MUSIC/Music Performance Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Fine Arts: MU101 (for majors)
Humanities: MU301, MU302, MU303
Mathematics: MA101 recommended

MAJOR:			36
Required courses:			
MU111	Theory Skills I	2 sh	
MU112	Theory Skills II	2 sh	
MU115	Theory I	3 sh	
MU116	Theory II	3 sh	
MU211	Theory Skills III	2 sh	
MU212	Theory Skills IV	2 sh	
MU215	Theory III	3 sh	
MU216	Theory IV	3 sh	
Controlled electives:			
Applied Music I thru VIII: private lessons in performance area- 2 sh each of eight semesters		16 sh	
OTHER REQUIREMENTS:			14
Music ensembles (MU120-136)		8 sh	
Music electives, with adviser approval		6 sh	
Jury clearance in major instrument, minor instrument (if any), and piano (if not major or minor instrument)		0 sh	
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters)		0 sh	
FREE ELECTIVES:			22
		TOTAL DEGREE REQUIREMENTS:	124

BACHELOR OF ARTS in MUSIC/Theory and Composition Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			52
Fine Arts: MU101 (for majors)			
Humanities: MU301, 302, 303			
Mathematics: MA101 recommended			
Health and Physical Education: HP205 recommended			
MAJOR:			51
Required courses:			
MU111	Theory Skills I	2 sh	
MU112	Theory Skills II	2 sh	
MU115	Theory I	3 sh	
MU116	Theory II	3 sh	
MU211	Theory Skills III	2sh	
MU212	Theory Skills IV	2 sh	
MU215	Theory III	3 sh	
MU216	Theory IV	3 sh	
MU217	Keyboard Harmony I	1 sh	
MU218	Keyboard Harmony II	1 sh	
MU306	Counterpoint I	2 sh	
MU315	Theory V	3 sh	
MU411	Composition I	2 sh	
MU412	Composition II	2 sh	
MU413	Composition III	2 sh	
MU414	Composition IV	2 sh	
Controlled electives:			
One from list: MU304, MU307, MU309		2 sh	
Applied Music I-VII: Private lessons in performance area- 2sh each of seven semesters		14 sh	

OTHER REQUIREMENTS:		**8**
Music ensembles (MU120-136)	8 sh	
Jury clearance in major instrument, minor instrument (if any), and piano B	0 sh	
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters)	0 sh	
FREE ELECTIVES:		**13**
	TOTAL DEGREE REQUIREMENTS:	**124**

BACHELOR OF FINE ARTS in MUSIC PERFORMANCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Fine Arts: MU101 (for majors)
Humanities: MU301, 302, 303
Mathematics: MA101 recommended

MAJOR:			**52**
Required courses:			
MU111	Theory Skills I	2 sh	
MU112	Theory Skills II	2 sh	
MU115	Theory I	3 sh	
MU116	Theory II	3 sh	
MU211	Theory Skills III	2 sh	
MU212	Theory Skills IV	2 sh	
MU215	Theory III	3 sh	
MU216	Theory IV	3 sh	
Controlled electives:			
Applied Music I thru VIII: private lessons in performance area—4 sh each of 8 semesters		32 sh	
OTHER REQUIREMENTS:			**20**
Music ensembles (MU120-136)		8 sh	
Music electives		12 sh	
Jury clearance in major instrument, minor instrument (if any), and piano C (unless major or minor)		0 sh	
Attendance at 8 recitals per semester (MU475, S grade, 8 semesters)		0 sh	
Junior and Senior Recitals		0 sh	
FREE ELECTIVES:			**0**
		TOTAL DEGREE REQUIREMENTS:	**124**

(1) Majors with piano or organ performance specialization must elect MU217 and MU218: Keyboard Harmony I and II, 1sh each.

BACHELOR OF SCIENCE IN EDUCATION in MUSIC EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Fine Arts: MU101 (for majors)
Humanities: MU301, 302, 303
Mathematics: MA101 recommended
Social Science: HP104, PC101
Health and Physical Education: HP205 recommended

MAJOR: 46

Required courses:

MU111	Theory Skills I	2 sh
MU112	Theory Skills II	2 sh
MU115	Theory I	3 sh
MU116	Theory II	3 sh
MU211	Theory Skills III	2 sh
MU212	Theory Skills IV	2 sh
MU215	Theory III	3 sh
MU216	Theory IV	3 sh
MU151-152	Class Voice I and II	2 sh(1)
MU153-154	Class Piano I and II	2 sh(2)
MU155	Class Strings I	1 sh
MU157	Class Percussion I	1 sh
MU159	Class Brass I	1 sh
MU161	Class Woodwinds I	1 sh
MU311	Fundamentals of Conducting	2 sh

Controlled electives:

One from list: MU312, or MU313	2 sh
Applied Music I thru VII: private lesson in performance area—2sh each of seven semesters	14 sh

OTHER REQUIREMENTS: 37

Professional Education Sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED421	Student Teaching Elementary Level	6 sh
ED441	Student Teaching Secondary Level	6 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
FE302	History and Philosophy of Education	3 sh
MU331	Elementary Methods	3 sh
MU333	Secondary Methods	3 sh

Music Ensembles (MU120-136)	7 sh
Jury clearance in major instrument, minor instrument (if any) and piano C (unless major or minor)	0 sh
Attendance of 8 recitals per semester (MU475, S grade, 7 semesters)	0 sh

FREE ELECTIVES: 0

TOTAL DEGREE REQUIREMENTS: 135

(1) For majors with voice as performance specialization, any three of the following may be substituted: MU351, 353, 354, 406.

(2) Private piano I and II (AM101,151) may be substituted.

DEPARTMENT OF THEATER

MALCOLM E. BOWES, CHAIRPERSON; BLACKLEDGE, DUTKIEWICZ-ZETTERBERG, EISEN, McCREARY, SIMPSON, ZETTERBERG

The Department of Theater has as its mission to provide for students of the university the opportunity for the study of theater arts as a part of a liberal and humanistic education. To fulfill this mission the department offers courses in the history and theory of drama, performance, and technical theater/design at both introductory and advanced levels.

The department offers production opportunities as a practical extension of the academic program during the regular academic year and summers and through off-campus internships with professional theater companies.

The Theater Department offers a Bachelor of Arts degree, a Bachelor of Fine Arts degree, and a minor in theater. Students may include theater courses as an option in the General Fine Arts degree offered through the College of Fine Arts. Those wishing to teach theater in the secondary schools may enroll in communications education with a concentration in theater which leads to a Bachelor of Science in Education and certification. The Bachelor of Arts in Theater provides for the study of theater within a broad liberal education. The Bachelor of Fine Arts in Theater provides intensive study in theater arts leading to advanced professional training or entry-level professional employment. Students may apply for admission to the B.F.A. program in their fourth semester and will be expected to provide portfolio or audition. A minor in theater consists of fifteen semester hours and courses approved by the chairperson of the Department of Theater.

BACHELOR OF ARTS in THEATER

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Fine Arts: AH101 or MU101

MAJOR: **36**

Required courses:

TH110	Script Analysis	3 sh
TH115	Principles of Theatre Design and Architecture	3 sh
TH201	Theatre History I	3 sh
TH202	Theatre History II	3 sh
TH301/302	Tragic Mask or Comic Mask	3 sh
TH310	Theatre Criticism	3 sh

Any three of the following:

TH120	Stagecraft I	3 sh
TH122	Costume Workshop	3 sh
TH221	Basic Lighting	3 sh
TH223	Makeup	3 sh

Any three of the following:

TH130	Stage Voice I	3 sh
TH131	Stage Movement I	3 sh
TH240	Acting I	3 sh
TH350	Directing	3 sh

OTHER REQUIREMENTS: 4

TH486	Practicum for Production (minimum of 1sh for 4 semesters)	

FREE ELECTIVES: 32

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF FINE ARTS in THEATER ARTS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Fine Arts: AH101 or MU101

MAJOR: 36

Required courses:

TH110	Script Analysis	3 sh
TH115	Principles of Theatre Design and Architecture	3 sh
TH201	Theatre History I	3 sh
TH202	Theatre History II	3 sh
TH301/302	Tragic Mask or Comic Mask	3 sh
TH310	Theatre Criticism	3 sh

Choose any three of the following:

TH120	Stagecraft I	3 sh
TH122	Costume Workshop	3 sh
TH221	Basic Lighting	3 sh
TH223	Makeup	3 sh

Choose any three of the following:

TH130	Stage Voice I	3 sh
TH131	Stage Movement I	3 sh
TH240	Acting I	3 sh
TH350	Directing	3 sh

OTHER REQUIREMENTS: 27

BFA Required Courses: Choose one from each group

A. TH220, 320, 321, 322		3 sh
B. TH330, 331, 340		3 sh
C. TH301, 302		3 sh
Additional requirements:		
TH486	(Maximum of 6 semesters at 1 sh each)	6 sh
TH399	Internship	0-6 sh

Controlled Electives: 6-12 sh

From list: TH120, 122, 130, 131, 220, 221, 223, 240, 320, 321, 322, 330, 331, 350, 481, 482, 483, 484, 489

FREE ELECTIVES: 9

TOTAL DEGREE REQUIREMENTS: 124

The College of Human Ecology and Health Sciences

HAL E. WINGARD, DEAN; TO BE NAMED, ASSOCIATE DEAN

The College of Human Ecology and Health Sciences comprises seven academic departments: Allied Health Professions, Consumer Services, Food and Nutrition, Health and Physical Education, Home Economics Education, Nursing, and Safety Sciences. Each department provides theoretical, laboratory, and practical experiences for students and prepares them for selected careers.

All faculty members of the college hold advanced academic degrees in their area of expertise. They have extensive experience as teachers and advisers and have had experience working in a variety of career fields.

Students can study in the following areas: Child Development/Family Relations, Community Services, Consumer Affairs, Dietetics, Fashion Merchandising, Food and Nutrition Science, Food Service Management, Health and Physical Education, Home Economics Education, Interior Design/Housing, Medical Technology, Nursing, Nutrition Education, Physical Education and Sport Science, Respiratory Care, and Safety Sciences.

Among the goals of the college are to emphasize human development and family relations; positive health in growth and development through nutrition, physical, and emotional fitness; prevention of illness; restoration of optimal health after illness; occupational safety and health; teacher education; consumerism; commercial and residential design; merchandising and buying of apparel and home furnishings; and management within the hospitality industry.

Courses in natural sciences are required of all majors, and students are encouraged to become involved in research activities and computer utilization.

The college offers a variety of opportunities to extend the students' educational experience through honorary and service organizations; field and clinical experiences; internships; workshops; preprofessional organizations; and sports and recreational activities.

ALLIED HEALTH PROFESSIONS DEPARTMENT

ALLAN T. ANDREW, INTERIM CHAIRPERSON

RESPIRATORY CARE

Respiratory therapists assist physicians in the care of patients who have respiratory system problems or illness that relates to breathing. Their assistance includes administering gaseous drugs and executing therapeutic procedures. Included are the operation and maintenance of specialized equipment.

The program leads to the degree of Bachelor of Science in Respiratory Care. Presented jointly by Indiana University of Pennsylvania and The Western Pennsylvania Hospital in Pittsburgh, the program offers intensive theoretical and applied knowledge to produce highly skilled graduates who are prepared to enter the profession as therapists or instructors.

Two academic years of university studies, followed by two academic years of hospital studies and clinical practice, constitute the program. Incoming students must maintain a QPA of 2.25 in Natural Sciences and Mathematics to be considered for admission into the clinical years in Respiratory Care. However, since admission to the hospital is competitive, IUP cannot guarantee admission into the hospital program.

BACHELOR OF SCIENCE in RESPIRATORY CARE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 41

Humanities: One elective
Mathematics: MA110 or higher level
Natural Science: CH101-102
Social Science: PC101, SO151, two others from list
Health and Physical Education: Two activity courses or MS101
Science/Math Elective: Science listed below

MAJOR: 62

Required courses:
Completed in junior and senior years at Western Pennsylvania Hospital in Pittsburgh

RT326	Respiratory Therapy Clinical Practice I	3 sh
RT327	Pharmacology	3 sh
RT328	Introduction to Respiratory Therapy	4 sh
RT329	Respiratory Therapy Instrumentation	4 sh
RT330	Cardiopulmonary Resuscitation	2 sh
RT331	Introduction to Ventilator Management	1 sh
RT333	Respiratory Therapy Clinical Practice II	4 sh
RT334	Respiratory Therapy Instrumentation and Application	4 sh
RT335	Nursing Arts	3 sh

RT336	Cardiopulmonary Evaluation and Clinical Correlation	4 sh
RT337	Introduction to Pulmonary Functions	1 sh
RT426	Respiratory Therapy Clinical Practice III	5 sh
RT427	Applied Pulmonary Physiology	4 sh
RT428	Essentials of ECG Interpretation	2 sh
RT429	Design and Function of Respiratory Therapy Dept.	2 sh
RT430	Pulmonary Function Studies	2 sh
RT431	Pediatric Respiratory Therapy	1 sh
RT433	Respiratory Therapy Clinical Practice IV	7 sh
RT434	Pediatrics and Selected Topics	3 sh
RT436	Respiratory Therapy Teaching	2 sh
RT437	Methods in Critical Care	2 sh
RT438	Cardiopulmonary Rehabilitation	1 sh

OTHER REQUIREMENTS: **21**

Science courses:

BI105	Cell Biology	4 sh
BI150	Human Anatomy	3 sh
BI151	Human Physiology	4 sh
BI241	General Microbiology	3 sh
PY151	Medical Physics Lec	3 sh
PY161	Medical Physics Lab	1 sh

Department elective:

One course from list: BI265, CO200, EP302, MG300, PC378 3 sh

FREE ELECTIVES: **0**

TOTAL DEGREE REQUIREMENTS: 124

MEDICAL TECHNOLOGY

Medical Technology encompasses the study of analytical and diagnostic procedures used in clinical laboratories and in medical research. Medical technologists perform a variety of laboratory tests upon which the physician depends for accurate diagnosis, prognosis, and proper treatment of the patient. The program of studies, presented jointly by IUP and accredited medical technology programs in hospitals, prepares the student to enter the profession. Upon completion of the four-year program, the degree of Bachelor of Science in Medical Technology is granted. The program also prepares the student for graduate and professional schools.

IUP maintains short and long-term affiliations with selected hospital schools. The Allied Health Department provides student counseling and maintains a liaison with hospital schools. However, since admission to any hospital program is on a competitive basis, IUP cannot guarantee admission into any hospital program.

Completion of academic studies at IUP and of one year of clinical experience qualifies the student to take a national certification examination. Successful results on this examination lead to certification as a professionally qualified medical technologist.

BACHELOR OF SCIENCE in MEDICAL TECHNOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 43

Humanities: One course from the list (3 sh)
Mathematics: MA110 or higher level
Natural Science: PY111/121-112/122
Social Science: Four courses from list (12 sh)
Science/Math Electives: From science sequence

MAJOR: 32

Required courses:

Medical technology courses as arranged at the affiliated hospitals when admitted to hospital school studies for a 12-month clinical year.

MT 400 Medical Technology Clinical Program

Registration mechanism and limited credit arrangement as provided in pre-approval process for Medical Technology Clinical Programs coordinated through the Allied Health Department.

MT 494	Clinical Microbiology	6-10 sh
MT 495	Clinical Chemistry	7-10 sh
MT 496	Clinical Hematology/Coagulation	4-7 sh
MT 497	Clinical Immunohematology	3-6 sh
MT 498	Clinical Immunology/Serology	2-4 sh
MT 499	Clinical Seminar	0-6 sh

OTHER REQUIREMENTS: Science sequence 45

Required courses:

BI105	Cell Biology	4 sh
BI120	Animal Biology	5 sh
BI361	Microbiology	3 sh
BI364	Immunology	3 sh
CH111-112	General Chemistry I and II	8 sh
CH231-232	Organic Chemistry I and II	8 sh
CH323	Analytical Methods	4 sh
CH351	Biochemistry	4 sh

Controlled Electives:

Two courses from list: BI263, 352, 360, 472, 476 6 sh

FREE ELECTIVES: 4

BI151 Human Physiology strongly recommended

TOTAL DEGREE REQUIREMENTS: 124

CONSUMER SERVICES DEPARTMENT

DONNA L. STREIFTHAU, CHAIRPERSON; CRAMER, KESNER, LYNN, SCHMITT, SHARMA, SWINKER, VIGGIANO, WOOD

The Consumer Services Department offers students an academic program leading to the Bachelor of Science degree in Consumer Affairs; a bachelor of science degree in Fashion Merchandising; and a bachelor of science degree in Interior Design and Housing. These majors prepare men and women for positions emphasizing consumer concerns in business and the community. The majors also provide preparation for students who wish to pursue graduate study in the areas of clothing, textiles, consumer economics, housing, equipment, interior design, and community service.

The department offers courses in the subject matter areas of clothing, textiles, fashion merchandising, housing, interior design, residential equipment, consumer electronics, consumer and family economics, and personal and family management. The faculty are interested in the growth of students and work closely with them to individualize programs to meet the students' career goals.

Students are encouraged to develop their individual potential through the application of knowledge gained in the classroom to job situations and departmental, campus, and community activities. Students may elect an internship which provides the opportunity to apply academic knowledge to an on-the-job situation. Cooperative courses may be elected whereby students have an ongoing practical professional experience. Students may elect a study tour to gain an understanding of business procedures and/or consumer problems in various areas of the world. Faculty advisers work closely with students in planning and integrating the academic program with enriching experiences outside the classroom.

A Visiting Student Program with the Fashion Institute of Technology (F.I.T.) in New York City is available to qualified Consumer Services students. Students who are approved by IUP and accepted by F.I.T. are able to receive both a bachelor's degree (IUP) and an associate degree (F.I.T.). The student's senior year is spent at F.I.T. pursuing concentrated coursework in one of the following areas: advertising and communications, fashion design, management engineering technology, textile design, textile technology, or jewelry design.

CONSUMER AFFAIRS

The Consumer Affairs major prepares individuals for professional positions in government, business, and the community. This option concentrates on consumer economic behavior and consumer protection and their relationship to the fair exchange and consumption of products and services. The increased interest in consumer concerns has resulted in creating and expanding positions for persons with an understanding of consumer needs, business operations, and regulatory agencies. The interdisciplinary approach provides the necessary knowledge and skills to fulfill the requirements of such positions.

COMMUNITY SERVICES TRACK

Students can elect a community services track which offers a broader selection of Human Ecology courses. Electives may be concentrated in particular Human Ecology areas. A concentration of courses is elected in a field of study outside home economics, such as sociology or psychology. Graduates may be employed by the Extension Service or by various governmental and social agencies.

FASHION MERCHANDISING

The Fashion Merchandising major prepares men and women for promotion and management positions in the field of retail merchandising related to apparel and home furnishings. Graduates are prepared for employment by business organizations producing or selling clothing, textiles, home furnishings, equipment, or other consumer products.

INTERIOR DESIGN/HOUSING

The Interior Design/Housing major prepares individuals to identify, research, and seek creative solutions relative to the needs of the proximate environment which can be fulfilled by the design of one's surroundings. Graduates are prepared for positions with retailers of furnishings and decorative arts as well as with companies producing items for the home; with residential, contract, and business design firms; with architectural and planning firms; as in-house designers for business firms and public institutions; and with HUD, manufactured housing companies, and private housing complexes.

BACHELOR OF SCIENCE in CONSUMER AFFAIRS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Mathematics: BE111 recommended
Natural Science: CH101-102
Social Science: EC121, PC101, SO151

MAJOR: 36

Required courses:

CS101	Personal and Family Management	3 sh
CS121	Introduction to Consumer Services	1 sh
CS213	Home Equipment/Consumer Electronics	3 sh
CS216	Clothing and Man	3 sh
CS312	Housing and Man	3 sh
CS314	Textiles	3 sh
CS315	Consumer Economics and Family Finance	3 sh
CS413	Problems in Consumer Economics	3 sh
CS421	Senior Seminar	2 sh
CS416	Problems in Family Finance	3 sh
JN120	Journalistic Writing	3 sh

Controlled electives:

Three courses from list: CS112, CS212, CS217, CS303, CS318, CS354, CS433, CS461, FN211, FN212, FN259, FN313, FN358, FN362 9 sh(1)

OTHER REQUIREMENTS: 24

Human Ecology requirements:

One course from HE218 or HE224		3 sh
One course from FN212 or FN451		3 sh

Outside Concentration:

Required:

AD235	Introduction to Business Law	3 sh
AD336	Law of Business Organizations	3 sh
AD337	Consumer Law	3 sh

Controlled electives: Three courses from list:
AD321, MG300, MK320, MK321, MK433 9 sh (1)

FREE ELECTIVES: 12

TOTAL DEGREE REQUIREMENTS: 124

(1) Substitutions may be approved by department.

BACHELOR OF SCIENCE in CONSUMER SERVICES/ Community Services Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Mathematics: MA101 recommended
Natural Science: CH101-102
Social Science: EC101, PC101, SO151

MAJOR: **32**
Required courses:

AR120	Principles of Design	2 sh
CS101	Personal and Family Management	3 sh
CS121	Introduction to Consumer Services	1 sh
CS213	Home Equipment/Consumer Electronics	3 sh
CS216	Clothing and Man	3 sh
CS312	Housing and Man	3 sh
CS314	Textiles	3 sh
CS315	Consumer Economics/Family Finance	3 sh
CS421	Senior Seminar	2 sh
FN212	Nutrition	3 sh
HE224	Marriage and Family Relations	3 sh

Controlled electives:
One course from list: CS112 or CS212 — 3 sh

OTHER REQUIREMENTS: **24**
Human Ecology requirements:

FN111	Foods 1	3 sh
HE218	Child Development	3 sh

Outside Concentration: 18 sh
Six courses from list: AN211, AN319, PC374, PC290, PC322, PC310, PC311, PC320, PC321, PC330, PC361, PC373, PC312, S0231, SO332, SO333, SO336, SO339, SO357, SO435, SW238.

FREE ELECTIVES: **16**

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE in FASHION MERCHANDISING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Mathematics: BE111 recommended
Natural Science: CH101-102
Social Science: PC101, EC101, or EC121

MAJOR: 35-36

Required courses:

CS121	Introduction to Consumer Services	1 sh
CS216	Clothing and Man	3 sh
CS314	Textiles	3 sh
CS315	Consumer Economics/Family Finance	3 sh
CS318	Fashion Merchandising	3 sh
CS421	Senior Seminar	2 sh
CS456	Historic Costume	3 sh
JN120	Journalistic Writing	3 sh

Controlled electives:

One course from CS112 or CS212	3 sh
Courses from CS212, CS213, AR113 or 120, CS217, CS303, CS354, CS433, CS453, CS454, CS455, EP303	11-12

OTHER REQUIREMENTS: 24

Human Ecology requirements:

One course from HE218 or HE224	3 sh
One course from FN212 or FN451	3 sh

Outside Concentration:

Required course:

AG201	Principles of Accounting I	3 sh

Controlled Electives: 15 sh(1)

Five courses from list: AD101 or MG360, AD235, AD321, AD336, AD337, AG202, AG301, AG302, DE332, DE333, EC122, QB215, IM241, FS310, FS351, MG300, MG410, MK320, MK321, MK420, MK421, MK422, MK430, MK433

FREE ELECTIVES: 12-13

TOTAL DEGREE REQUIREMENTS: 124

(1) Substitutions may be approved by department.

BACHELOR OF SCIENCE in INTERIOR DESIGN/HOUSING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Fine Arts: AH101
Humanities: AH115 or AH116, HI101
Mathematics: BE111 recommended
Natural Science: CH101-102
Social Science: EC121, PC101, SO151

MAJOR: 35

Required courses:

CS121	Introduction to Consumer Services	1 sh
CS213	Home Equipment/Consumer Electronics	3 sh
CS217	Interior Design	3 sh
CS312	Housing and Man	3 sh
CS314	Textiles	3 sh
CS315	Consumer Economics and Family Finance	3 sh
CS421	Senior Seminar	2 sh

Controlled electives:

One course from AR113 or AR120	3-2 sh
Courses from list: CS101, CS303, CS311, CS318, CS354, CS465, CS357, CS433, CS462, CS463, CS464, CS481	14-15 sh

OTHER REQUIREMENTS: 24

Human Ecology requirements:

One course from list: HE218 or HE224	3 sh
One course from list: FN212 or FN451	3 sh
Outside Concentration: Six courses from lists	18 sh
Business: AD101 or MG360, AD321, AD382, AG201, DE331, DE332, DE333, IM241, FS242, MG300, MK320, MK433	
Art: AR100, AR111, AR112, AR211, AR213, AR214, AR215, AR216, AR217, AR218, AR219, AR321, AR451	

FREE ELECTIVES: 13

TOTAL DEGREE REQUIREMENTS: 124

FOOD AND NUTRITION DEPARTMENT

JOANNE STEINER, CHAIRPERSON; BAKER, CAUFFIEL, CESSNA, DAHLHEIMER, GRESSLEY, JOHNSON, MILLER, MINNICK, MOORE-ARMITAGE, SIMKINS

The Food and Nutrition Department prepares men and women for careers in the fields of dietetics, food and nutrition science, food service management, lodging management, and nutrition education.

Courses offered by the Food and Nutrition Department prepare students as professionals to meet the challenge of expanding career opportunities, which include not only the commercial food service and hospitality facets of the industry but health care, educational, and research segments as well.

The prime requisites for success in the field of food and nutrition are an interest in people, an artistic appreciation of quality food, a realization of the need for good nutrition, and a knowledge of sound business principles.

A new program track with related courses in Lodging Management has recently been approved. It is designed to provide the graduate with entry-level skills for the lodging, hotel, restaurant, institution, and lodging industries. An internship is required.

This department offers the following four majors:

Dietetic Major

Students are prepared for positions in the dietary departments of hospitals or other institutional establishments or in health care programs. The major can lead to careers in clinical dietetics, administrative dietetics, community nutrition, and other health care fields. Course requirements meet the Plan IV academic requirements of the American Dietetics Association.

BACHELOR OF SCIENCE in DIETETICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Mathematics: MA217 recommended
Natural Science: CH101-102
Social Science: EC101, PC101, SO151
Science/Math elective: CO200 (if math other than MA217)

MAJOR:			38
Required courses:			
FN150	Foods	4 sh	
FN212	Nutrition	3 sh	
FN259	Food Purchasing	3 sh	
FN313	Quantity Food Production	4 sh	
FN355	Nutrition in Disease I	3 sh	
FN356	Food Service Personnel and Administration	3 sh	
FN358	Food Service Equipment and Layout	3 sh	
FN362	Experimental Foods	3 sh	
FN364	Methods of Teaching	3 sh	
FN402	Community Nutrition	3 sh	
FN455	Nutrition in Disease II	3 sh	
FN458	Advanced Human Nutrition	3 sh	
OTHER REQUIREMENTS:			16
Additional Sciences:			
BI155	Human Physiology and Anatomy	4 sh	
BI232	Fundamentals of Microbiology	3 sh	
CH355	Biochemistry	3 sh	
Human Ecology requirements:			
One course from list: HE218 or HE224		3 sh	
One course from list: CS213, CS315 or CS101		3 sh	
FREE ELECTIVES:			18
		TOTAL DEGREE REQUIREMENTS:	**124**

Food and Nutrition Science Major

Food and Nutrition Science provides a student with a background in the basic sciences that gives a solid foundation for theoretical and applied food science and nutrition. Emphasis is placed on laboratory work in nutrition and food composition. The program meets the needs of students motivated in the biological-physical sciences and who wish, with graduate education, to enter careers in food/nutrition research, nutrition service professions, medical science, and education.

BACHELOR OF SCIENCE in FOOD AND NUTRITION SCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			53
Mathematics: MA121			
Natural Science: CH111-112			
Social Science: EC101, PC101, SO151			
Science/Math elective: MA217			
MAJOR:			29
Required courses:			
FN150	Foods	4 sh	
FN212	Nutrition	3 sh	
FN362	Experimental Foods	3 sh	
FN451	Man and Food	3 sh	
FN458	Advanced Human Nutrition	3 sh	
FN464	Food and Nutrition Research Methods	3 sh	
FN484	Senior Seminar	1 sh	

Controlled electives:
Three courses from list: 9 sh
FN312, FN355(1), FN444, FN447, FN455(1), FN462, FN482

OTHER REQUIREMENTS: 28

Science Sequence:

BI150	Human Anatomy	3 sh(2)
BI151	Human Physiology	4 sh(2)
BI232	Fundamentals of Microbiology	3 sh(2)
CH231	Organic Chemistry I	4 sh
CH351	Biochemistry	4 sh
PY111	Physics I Lec	3 sh
PY121	Physics I Lab	1 sh

Human Ecology requirements:
One course from list: HE218 or HE224 3 sh
One course from list: CS213, CS315, or CS101 3 sh

FREE ELECTIVES: (3) 14

TOTAL DEGREE REQUIREMENTS: 124

(1) FN355 and FN455 must be completed as a sequence, if elected.
(2) Alternate Biology sequence recommended for graduate study preparation: BI105, BI151, BI361.
(3) To meet American Dietetic Association requirements: FN259, FN313, FN355, FN356, FN364, FN402, FN455 (22 sh total).

Food Service Management Major

This program is planned to prepare graduates for management positions with institutions, commercial restaurants, and other food service establishments. Graduates have competencies in food service/hospitality management and in business.

BACHELOR OF SCIENCE in FOOD SERVICE MANAGEMENT

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Mathematics: BE111 recommended
Natural Science: CH101-102
Social Science: EC101, PC101, SO151 suggested
Science/Math electives: CO200

MAJOR: 35

Required courses:

FN101	Intro to Hospitality	3 sh
FN150	Foods	4 sh
FN212	Nutrition	3 sh
FN259	Quantity Food Purchasing	3 sh
FN306	Food and Beverage Service, Sales and Menu Design	3 sh
FN313	Quantity Food Production and Service	4 sh
FN356	Food Service Personnel and Administration	3 sh
FN358	Food Service Equipment and Layout	3 sh
FN364	Methods of Teaching	3 sh
FN401	Food Management Cost Controls	3 sh
FN406	Catering Management	3 sh

OTHER REQUIREMENTS: 21

Outside courses:

AD235	Intro to Business Law	3 sh
AG201	Principles of Accounting I	3 sh
BI232	Fundamentals of Microbiology	3 sh
LR480	Principles and Practices of Collective Bargaining	3 sh
MK320	Marketing	3 sh

Human Ecology requirements:

One course from list: HE218 or HE224	3 sh
One course from list: CS213, CS315 or CS101	3 sh

FREE ELECTIVES: 16

TOTAL DEGREE REQUIREMENTS: 124

Food Service and Lodging Management Track

The food service and lodging track prepares students for entry-level careers in hotel and food service management. Graduates are knowledgeable in the basic operational tasks of a lodging facility, including food service operations, management of employees, handling of guest services, touring arrangements, and convention services. An internship in lodging is required.

BACHELOR OF SCIENCE in FOOD SERVICE MANAGEMENT/ Food Service and Lodging Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Mathematics: BE111 recommended
Natural Science: CH101-102
Social Science: PC101, SO151, EC121
Science/Math: CO200

MAJOR: 38

Required courses:

FN101	Intro to Hospitality	3 sh
FN150	Foods	4 sh
FN115	Intro to Tourism	3 sh
FN306	Food and Beverage Service, Sales and Menu Design	3 sh
FN313	Quantity Food Production and Service	4 sh
FN356	Food Service Personnel and Administration	3 sh
FN360	Lodging and Front Office Administration	3 sh
FN365	Housekeeping, Maintenance, and Energy Management	3 sh
FN411	Seminar in Food Service and Lodging	3 sh
FN420	Convention Sales and Service	3 sh
FN493	Internship: Lodging	6 sh(1)

OTHER REQUIREMENTS: 18

Human Ecology requirements:

One course from list: HE218 or HE224	3 sh
One course from list: CS213, CS315 or CS101	3 sh

Outside courses:

AD235	Business Law I	3 sh
AG201	Principles of Accounting I	3 sh
BI232	Fundamentals of Microbiology	3 sh
MK320	Marketing	3 sh

FREE ELECTIVES: (1) 16

TOTAL DEGREE REQUIREMENTS: 124

(1) Internship credits in excess of six must be applied as free electives.

Nutrition Education Major

Graduates are prepared to manage school food service programs; to provide meals with optimum nourishment to school children, to the elderly, to child care centers, or to any of the many nutrition feeding programs; and to render professional service to teachers concerning the teaching of nutrition.

This program meets Pennsylvania Department of Education certification requirements for a Nutrition Program Specialist (Education Specialist I).

BACHELOR OF SCIENCE IN EDUCATION in NUTRITION EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Mathematics: BE111 recommended
- Natural Science: CH101-102
- Social Science: EC101, HI104, PC101, SO151
- Science/Math electives: CO200 suggested

MAJOR: 35

Required courses:

FN150	Foods	4 sh
FN212	Nutrition	3 sh
FN259	Quantity Food Purchasing	3 sh
FN312	Maternal, Child, and Adolescent Nutrition	3 sh
FN313	Quantity Food Production and Service	4 sh
FN356	Food Service: Personnel and Administration	3 sh
FN358	Food Service Equipment and Layout	3 sh
FN362	Experimental Foods	3 sh
FN364	Methods of Teaching	3 sh
FN402	Community Nutrition	3 sh
FN408	Institutional Food Service Management	3 sh

OTHER REQUIREMENTS: 26

Outside courses:

AG201	Accounting Principles 1	3 sh
BI155	Human Physiology and Anatomy	4 sh
BI232	Fundamentals of Microbiology	3 sh
CM301	Instructional Media	3 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
FE302	History and Philosophy of Education	3 sh

College of Human Ecology requirements:

One course from HE218 or HE224	3 sh
One course from CS213, CS315, or CS101	3 sh

FREE ELECTIVES: 11

TOTAL DEGREE REQUIREMENTS: 124

Course requirements for American Dietetic Association registration can be met by taking elective courses: FN355, FN455, FN458, CH355.

DEPARTMENT OF HEALTH AND PHYSICAL EDUCATION

JAMES G. MILL, CHAIRPERSON; AIERSTOCK, BARTHELEMY, BECK, BLACKSMITH, CELTNIEKS, CLARK, CORTAZZO, DAKAK, DAVIS, DICKIE, ELTZ, GODLASKY, GROVE, HORNFECK, JOHNSON, KORAB, LEPLEY, LISCINSKY, LOMMOCK, MILEFF, MONTGOMERY, MOORE, NEAL, SLEDZIK, SLONIGER, SUTTON, THOMPSON, TUCKER

The Department of Health and Physical Education provides the following services: (1) instruction in health and physical education as part of the university's General Education requirement; (2) an undergraduate major in health and physical education that leads to the Bachelor of Science degree in Education with potential certification to teach in the Commonwealth of Pennsylvania; (3) Bachelor of Science degree in Physical Education and Sport; and (4) Endorsement program in Driver Education — Safe Living.

Required Program - General Education

Coeducational General Activity Courses: The objective of the General Education activity program in Physical Education is health and wellness for the student both at present and for the future. The objective is accomplished by an activity program which includes two major thrusts: the development of physical fitness and the development of skills for recreational, lifetime sports. Physical fitness is essential for optimal health and well-being and enables individuals to enjoy the therapy of recreational sports.

University students are required to complete two semesters of physical education and one semester of health (HP101) to fulfill the General Education requirement (4sh). Veterans with proper verification (DD214) are awarded four credits in this area. Students may substitute four semester hours of the ROTC program (MS101-102) for the health and physical education requirement. To implement this philosophy it is recommended that all students elect at least one of the following fitness courses to fulfill the physical education requirement: HP115, 117, 118, 122, 123, 126, 133, 139, 146, and 265. Courses which emphasize the recreational, lifetime sports include: HP110, 113, 119, 120, 121, 125, 127, 128, 129, 134, 137, 138, 145, 147, 161, 163, 261, 262, 266, and 267.

Bachelor of Science Degree (Physical Education and Sport)

A Bachelor of Science degree in Physical Education and Sport is also offered at IUP. This major focuses more on subject matter content with less concern for application in the field of education. This degree program is in response to individuals who desire to study theory in physical education and sport and who may want to utilize the subject matter in nonteaching opportunities. In the next twenty years as we evolve toward a more health and leisure-centered society, it appears a necessity that people are prepared in physical education to assume leadership roles as fitness specialists in public and private recreation as well as corporate fitness programs.

completion of the degree program, the student is qualified for an Instructional I Certificate in Health and Physical Education, issued by the Pennsylvania Department of Education in Harrisburg. This certificate is valid for teaching health and physical education in grades K through 12 for three years in the public schools of Pennsylvania. Major students may utilize free electives to specialize in the areas of aquatics or dance.

In addition, the Department of Health and Physical Education has developed two programs approved by the National YMCA Physical Education Office to provide for the professional preparation of YMCA Aquatic Directors and Physical Directors. Both programs emphasize high standards and are vitally concerned with the major objectives of YMCA physical education. Specialized "Y" courses are offered through the IUP Aquatic School, the annual Middle Atlantic Region Aquatic Institute held at IUP each spring, and through other special YMCA programs conducted on the IUP campus and sponsored in cooperation with the Middle Atlantic Region Physical Education Program.

Candidates for the degree program in Health and Physical Education must demonstrate acceptable cognitive and psychomotor qualifications as well as desirable character and personality traits. The professional program seeks to foster those qualities of individual character and competence that are inherent in personal and professional maturity. These competencies are evaluated at the end of the sophomore year. The student is either granted Advanced Standing in the department or restricted in scheduling advanced courses for not less than one probationary semester. Continuation in the major program is based upon attainment of department Advanced Standing.

Driver Education-Safe Living 7-12

Candidates for the driver education certification must possess, or be a candidate for, a valid Pennsylvania certificate in any area of certification. A student must currently complete the four courses HP251, HP252, HP353, and HP354. Students must request the certificate in driver education-safe living 7-12 when they apply for graduation. For students who have already graduated, contact the office of the dean, College of Education, for correct procedure.

Aquatics School Course Offerings

Each summer the department offers the annual Aquatics School for eight consecutive days. Students must be 17 years of age or older and possess the necessary aquatic prerequisites. A fee will be charged which will include room, three meals a day, use of equipment, accident insurance, transportation to and from the lake, and special one-night programs. Certification will be granted by the American Red Cross, National YMCA, Professional Association of Diving Instructors, and the American Heart Association upon completion of courses. All courses may be taken for college credit, if the student is eligible and pays the additional tuition fee. For more information, contact the aquatic director. Courses offered exclusively as a part of the Aquatics School are HP267, 268, 269, 270, 271, 272, 273, 274, 276, 277, 279, and 280. Courses offered during the academic year as well as in summer school include HP242, 261, 265, and 266.

BACHELOR OF SCIENCE in PHYSICAL EDUCATION AND SPORT

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA101 or MA110 or MA217
Natural Science: CH101-102
Social Science: EC101, PC101, SO151
Science/Math elective: BI151

MAJOR:			**38**
Required courses:			
HP142	Foundations of Health, Physical Education, and Recreation	3 sh	
HP221	Human Structure and Function	3 sh	
HP242	Emergency Health Care	1 sh	
HP246	Biomechanics	3 sh	
HP344	Adapted Physical Education	3 sh	
HP345	Athletic Training I	3 sh	
HP346	Athletic Training I Lab	1 sh	
HP441	Psychosocial Implications for Health, Physical Education, and Recreation	3 sh	
HP442	Seminar in Health, Physical Education, and Recreation	3 sh	
Controlled electives: Additional HP major courses, or approved substitutes, totaling 15 sh			
HP200	Fundamentals of Physical Activity	1 sh	
HP230	Aerobic Fitness	2 sh	
HP319	Preprofessional Experience II	1 sh	
HP343	Physiology of Exercise	3 sh	
HP410	Exercise Prescription	3 sh	
HP412	Physical Activity and Stress Management	3 sh	
HP413	Physical Activity and Aging	3 sh	
Recommended: Sequence in Nutrition			**18**
Required courses:			
CH355	Biochemistry and Nutrition	3 sh	
FN212	Nutrition	3 sh	
FN355	Nutrition in Disease I	3 sh	
FN455	Nutrition in Disease II	3 sh	
FN458	Advanced Human Nutrition	3 sh	
FN463	Nutrition Counseling	3 sh	
Recommended Electives			**15**
Recommended electives: FN410, FN451, HP493			

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in HEALTH AND PHYSICAL EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA217 (recommended)
Natural Science: BI103-104
Social Science: HI104, PC101
Science/Math elective: CH103

Bachelor of Science in Education (Health and Physical Education)

Requirements for the degree of Bachelor of Science in Education with a major in Health and Physical Education include the university's General Education requirements, Professional Education requirements, and the Health and Physical Education core requirement (39 sh). Upon

MAJOR: **41**

Required courses:

HP142	Foundations of Health, Physical Ed, and Recreation	3 sh
HP221	Human Structure and Function	3 sh
HP343	Physiology of Exercise	3 sh
HP246	Biomechanics	3 sh
HP325	School Health Program	3 sh
HP344	Adapted Physical Education	3 sh
HP345	Athletic Training I	3 sh
HP346	Athletic Training I Lab	1 sh
HP426	Health Science Instruction	3 sh
HP441	Psychosocial Implications	3 sh
HP442	Seminar in Health Physical Education	3 sh

Controlled electives:

Courses from list: HP200-208, HP263, HP300-307 — 10 sh

OTHER REQUIREMENTS: **29**

Professional Education Sequence:

ED242	Pre-Student Teaching I	1 sh
ED342	Pre-Student Teaching II	1 sh
ED421	Student Teaching	6 sh
ED441	Student Teaching	6 sh
ED442	School Law	1 sh
EP302	Education Psychology	3 sh
FE302	History and Philosophy of Education	3 sh
HP242	Emergency Health Care	1 sh
HP318	Preprofessional Experience I	1 sh
HP321	Methods in Elementary HPE	3 sh
HP341	Evaluation in HPE	3 sh

FREE ELECTIVES: **1**

TOTAL DEGREE REQUIREMENTS: 124

CERTIFICATION in DRIVER EDUCATION-SAFE LIVING

Certification in Driver Education-Safe Living may be added to a valid Pennsylvania Instructional Certificate with the completion of the following courses:

HP251	Accident Causation and Prevention	3 sh
HP252	Introduction to the Driving Task	3 sh
HP353	Driving Education Program Management	3 sh
HP354	Application of Driver Ed Instructional Modes	3 sh

HOME ECONOMICS EDUCATION DEPARTMENT

RUTH BROWNING, CHAIRPERSON; BELL, GALLATI, GORDON, HOVIS, NELSON

A number of career opportunities await the person who completes either the Home Economics Education program or Child Development and Family Relations program.

HOME ECONOMICS EDUCATION MAJOR

A major in Home Economics Education leads to a Bachelor of Science in Education and meets certification requirements for teaching home economics at all levels (K-12) in the schools of Pennsylvania. Upon completion of this program, students have the semester hours necessary for teaching in child care programs and are eligible to receive the Nursery-Kindergarten Certificate issued by the Bureau of Private Academic Schools.

Graduates also are prepared for a variety of employment related to improving family life, such as home economists for extension services, utility companies, retail business concerns, social service organizations, and government agencies. The program provides preparation for students who wish to pursue advanced degrees.

Child Development Track

Students receive in-depth preparation for teaching Parenting and Child Development in high school home economics programs, adult programs, and community organizations. Those selecting this option take all required courses for the home economics education degree and, in consultation with an adviser, select eight semester hours of electives in the Child Development and Family Relations area. Student teaching experience will take place in a center that has a Child Development and/or Parenting program.

Occupational Home Economics Track

This option is planned to prepare graduates for teaching in home economics occupational programs in comprehensive high schools, vocational-technical schools, adult education programs, and community colleges. Students selecting this option take all the courses required for the home economics education degree and, in consultation with an adviser, select additional courses and work experience in the area of specialization. Student teaching experience will take place in a center with an Occupational Home Economics Program. The Occupational Competency Exam in the area of specialization is taken upon graduation. Passing the exam permits the addition of the specialization to the teaching certification.

BACHELOR OF SCIENCE IN EDUCATION in HOME ECONOMICS EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52-53

Natural Science: CH101-102

Social Science: HI104, PC101, SO151 (for N-K certification) Science/Math: BI155 or BI232

MAJOR: 34

Required courses:

CS213	Home Equipment/Consumer Electronics	3 sh
CS314	Textiles	3 sh
CS315	Consumer Economics and Family Finance	3 sh
FN150	Foods	4 sh
FN212	Nutrition	3 sh
HE218	Child Development	3 sh
HE224	Marriage and Family Relations	3 sh
HE320	Teaching in Child Development Centers	3 sh

Controlled electives:

Two from list: CS112, CS212, CS453, CS454	6 sh
One from list: CS217 or CS312	3 sh

OTHER REQUIREMENTS: 31

Professional Education Sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching Clinical Experience I	1 sh
ED342	Pre-student Teaching Clinical Experience II	1 sh
ED431	Student Teaching in Home Economics	6 sh
ED441	Student Teaching	6 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
FE302	History and Philosophy of Education	3 sh
HE250	Introduction to Teaching Vocational Home Economics Education	3 sh
HE350	Evaluation and Methods of Teaching Vocational Home Economics	3 sh
HE430	Student Teaching Practicum	1 sh

FREE ELECTIVES: 7

TOTAL DEGREE REQUIREMENTS: 124

CHILD DEVELOPMENT/FAMILY RELATIONS MAJOR

The Child Development/Family Relations program leads to a Bachelor of Science degree. Primary objectives of the program are to prepare professionals to administer and teach in programs that entail aspects of child development and/or family relations, to teach at the adult level, or to supervise and direct professional, paraprofessional, and volunteer staffs in federal, state, or local family supportive agencies. In addition, students enrolled in this major may secure, with a dual major, certification in Early Childhood Education. The program also provides preparation for students who want to pursue graduate study in the area of child development/family relations.

BACHELOR OF SCIENCE in CHILD DEVELOPMENT/FAMILY RELATIONS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA101 or 110 or 121 or 217 (1)
Natural Science: CH101-102
Social Science: AN110, PC101, SO151
Science/Math: BI155

MAJOR: 36

Required courses:

HE218	Child Development	3 sh
HE224	Marriage and Family Relations	3 sh
HE317	Infant Development	3 sh
HE318	Topics in Preschool Education	3 sh
HE320	Teaching in Child Development Centers	3 sh
HE324	Family Dynamics	3 sh
HE418	Advanced Child Development	3 sh
HE421	Preschool Education	3 sh
HE422	Early Childhood Education	3 sh
HE424	Family Issues	3 sh
HE426	Techniques of Parent Education	3 sh
HE463	Family and the Community	3 sh

OTHER REQUIREMENTS:			**18**
Human Ecology Requirements:			
FN212	Nutrition	3 sh	
CS315	Consumer Economics and Family Finance	3 sh	
Outside Courses:			
CM301	Instructional Media	3 sh	
EP302	Educational Psychology	3 sh	
Two courses from list: CM440, CR451, EP383, EX300, HE250, HE350, HE427, PC374, PC320, PC321, PC330, PC373, SH254.		6 sh	
FREE ELECTIVES:			**17**

TOTAL DEGREE REQUIREMENTS: 124

(1) Math for Elementary Teachers I or II (MA151 or 152) is not acceptable.

NURSING DEPARTMENT

CARLEEN ZONI, CHAIRPERSON; ALLEN, BELLAK, BLACK, BLAIR, CATELL, CUNNINGHAM, EDWARDS, HART, HOLT, KRESAK, KUZNESKI, MURRAY, POLANSKY, RIEHL-SISCA, ROSSITER, SADLER, SETTLEMYER, SMATLAK, SNYDER, STEELE, SZWARC, THISTLETHWAITE, TWAL, WALZ

The College of Human Ecology and Health Sciences offers a curriculum leading to the Bachelor of Science degree in Nursing. Students are admitted to the nursing major as freshmen. Upon completion of the program, the graduate is prepared to write the examination for Pennsylvania licensure as a registered nurse. The program is fully accredited by the National League for Nursing.

The nursing curriculum has as its primary goal the development of competent professional nurses who are liberally educated, clinically competent, and aware of their social responsibilities as members of the health professions. The program is designed to provide a broad background in general education, coupled with the specialized knowledge and skills required for professional nursing. Additionally, the curriculum prepares the nurse to practice within the professional code of nursing ethics, to function effectively as a member of the health care professions, and to utilize scientific principles in planning and implementing health care. The objectives of the nursing program emphasize learning of concepts of health and illness, disease prevention, health maintenance and rehabilitation, and provision of health care in acute care settings and various community settings.

The first three semesters are devoted mainly to general education and science courses considered essential to the nursing major. The first clinical nursing courses begin in the fourth semester. Clinical experiences in patient care are provided in acute and long-term care facilities as well as community health agencies throughout the last five semesters. Men and women are eligible to enroll in the nursing program.

Registered Nurse students are enrolled in the basic baccalaureate program in nursing. They will have a genuine upper division major in Nursing and will fulfill all degree requirements set by the university and the Nursing Department. The Registered Nurse student may be awarded advanced standing, based on prior work completed at an accredited college or university, and on exemption tests in nursing at a given point in the curriculum.

BACHELOR OF SCIENCE in NURSING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **49**
Mathematics: MA217
Natural Science: CH101-102
Social Science: PC101, SO151, two others from list, PC310
Science/Math elective: not included—other sciences substituted

MAJOR: **53**
Required courses:

NU280	Nursing Core I	3 sh
NU285	Nursing I	3 sh
NU302	Nursing II	3 sh
NU303	Nursing IIA	5 sh
NU304	Nursing III	3 sh
NU305	Nursing IIIA	5 sh
NU322	Nursing Core II	3 sh
NU323	Nursing Core III	3 sh
NU402	Nursing IV	3 sh
NU403	Nursing IV-A	5 sh
NU404	Nursing V	3 sh
NU405	Nursing V-A	5 sh
NU422	Nursing Core IV	3 sh
NU423	Nursing Core V	3 sh
NU430	Nursing Research	3 sh

OTHER REQUIREMENTS: **24**
Science Sequence:

BI105	Cell Biology	4 sh
BI150	Human Anatomy	3 sh
BI151	Human Physiology	4 sh
BI241	General Microbiology	3 sh
FN212	Nutrition	3 sh
PC321	Abnormal Psychology	3 sh
PY151	Medical Physics Lec	3 sh
PY161	Medical Physics Lab	1 sh

FREE ELECTIVES: **0**

TOTAL DEGREE REQUIREMENTS: 126

SAFETY SCIENCES DEPARTMENT

NICK PACALO, CHAIRPERSON; CHEKANSKI, CHRISTENSEN, CVEJANOVICH, McCLAY, McCLOSKY, REED, SOULE

The department offers the degree of Bachelor of Science in Safety Sciences with specialization in occupational safety and health. General industrial safety and mine safety tracks are offered within this curriculum.

The degree in Safety Sciences prepares the student for professional administrative managerial and supervisory positions in industry, manufacturing, insurance, transportation, utility, government, construction, trade service industries, and others. There remains an acute need in Pennsylvania and the nation for university-educated occupational safety and health professionals. The curriculum includes a major of 36 semester hours in Safety Sciences and an additional eighteen semester hours in related professional courses. A variety of elective courses is available in both the major and professional course fields that enable students to strengthen their primary interest areas.

BACHELOR OF SCIENCE in SAFETY SCIENCES/Industrial Safety Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA121
Natural Science: CH101-102
Social Science: EC122, PC101, SO151
Science/Math elective: MA217

MAJOR: **36**

Required courses: Industrial Safety Track

SA101	Introduction to Occupational Safety and Health	3 sh
SA111	Principles of Industrial Safety I	3 sh
SA211	Principles of Industrial Safety II	3 sh
SA301	Health Hazard Identification	3 sh
SA302	Health Hazard Evaluation	3 sh
SA303	Control of Health Hazards	3 sh
SA311	Industrial Fire Protection	3 sh
SA412	Evaluation of Safety Programs	3 sh
SA493	Internship	6 sh

Controlled electives:

One course from list: SA345 or SA347	3 sh
One additional SA elective	3 sh

OTHER REQUIREMENTS: **38**

Additional Science and Math

MA122	Calculus for N S/S S/Bus	4 sh
PY111	Physics I Lec	3 sh
PY112	Physics II Lec	3 sh
PY121	Physics I Lab	1 sh
PY122	Physics II Lab	1 sh
BI155	Human Physiology and Anatomy	4 sh

Behavioral elective:

One course from list: MG311, PC420 or SO340	3 sh

Computer elective:

One course from list: CO200 or IM241	3 sh

Professional Courses:

MG360	Management and Production Concepts	3 sh
HP242	Emergency Health Care	1 sh

Technical Writing Elective:

One course from list: EN322 or EN220	3 sh

Controlled Electives:

Three courses approved by the student's advisor	9 sh

FREE ELECTIVES: **3**

TOTAL DEGREE REQUIREMENTS: 130

BACHELOR OF SCIENCE in SAFETY SCIENCES/Mine Safety Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Mathematics: MA121
Natural Science: CH101-102
Social Science: EC122, PC101, SO151
Science/Math elective: MA217

MAJOR: **36**

Required courses: Mine Safety Track

SA102	Introduction to Mine Safety	3 sh
SA111	Principles of Industrial Safety I	3 sh
SA211	Principles of Industrial Safety II	3 sh
SA231	Principles of Mine Safety I	3 sh
SA232	Principles of Mine Safety II	3 sh
SA301	Health Hazard Identification	3 sh
SA302	Health Hazard Evaluation	3 sh
SA401	Mine Ventilation	3 sh
SA412	Evaluation of Safety Programs	3 sh
SA493	Internship	6 sh

Controlled electives:
One course from list: SA345 or SA347 — 3 sh

OTHER REQUIREMENTS: **38**

Additional Science and Math

MA122	Calculus for N S/S S/Bus	4 sh
PY111	Physics I Lec	3 sh
PY112	Physics II Lec	3 sh
PY121	Physics I Lab	1 sh
PY122	Physics II Lab	1 sh
BI155	Human Physiology and Anatomy	4 sh

Behavioral elective:
One course from list: MG311, PC420, or SO340 — 3 sh

Computer elective:
One course from list: CO200 or IM241 — 3 sh

Professional Courses:

MG360	Management and Production Concepts	3 sh
HP242	Emergency Health Care	1 sh

Technical Writing Elective:
One course from list: EN322 or EN220 — 3 sh

Controlled Electives:
Three courses approved by the student's adviser — 9 sh

FREE ELECTIVES: **3**

TOTAL DEGREE REQUIREMENTS: 130

The College of Humanities and Social Sciences

OLIVER J. FORD, DEAN; JUNE K. PHILLIPS, ASSOCIATE DEAN

The College of Humanities and Social Sciences has as its objective the providing of a liberal education as the basis of the student's preparation for a satisfying career. In a dynamic society such as America's, a broad liberal education accompanying career preparation is virtually a necessity. The college maintains an emphasis upon fundamental understanding and application of the basic principles of our cultural heritage, combined with development of a thorough background of knowledge in the student's specific area of interest. It seeks to promote in students critical and objective thinking, analytical skill, and a keen awareness of their responsibilities to society as it prepares them for their chosen field.

The college's programs of study are:

- Anthropology
- Criminology
- Economics
- English
- Foreign Languages and International Trade
- French
- Geography
- German
- Government and Public Service
- History
- Industrial and Labor Relations
- International Studies
- Journalism
- Law School Preparation
- Philosophy
- Political Science
- Regional Planning
- Religious Studies
- Sociology
- Spanish
- Speech (inactive)

DEGREES

The departments of Criminology, Economics, English, French, Geography, German, History, Journalism, Philosophy and Religious Studies, Political Science, Spanish and Classical Languages, and Sociology-Anthropology offer work leading to a Bachelor of Arts degree. The Bachelor of Science is offered in Regional Planning. In addition, the Associate of Arts degree is offered by the Criminology Department at the Punxsutawney campus.

Several departments offer Master of Arts or Master of Science degrees in the university's Graduate School, and the English department offers graduate programs leading to the Doctor of Philosophy degree. Information about these programs should be obtained from the Graduate School.

DEGREE REQUIREMENTS

In addition to the university's General Education requirements, all students seeking a baccalaureate degree in the College of Humanities and Social Sciences must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements, and for those minoring in a specific field, appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be selected only with adviser approval. As a general principle, there is considerable latitude in course choice for Humanities and Social Sciences majors; for specifically required courses, substitutions in any program must have the written approval of the student's department chairperson or the college dean. The intermediate series foreign language requirement (a description follows) applies without exception to all Humanities and Social Sciences four-year degree programs.

GENERAL EDUCATION LANGUAGE REQUIREMENTS

Students in the colleges of Natural Sciences and Mathematics and of Humanities and Social Sciences, who must pass a second-year language course (FL 251 and 252) as a college requirement for graduation, may choose any one of the five languages offered. The six semester hours for these courses are part of the General Education requirement. Self-instruction in Critical Languages fulfills the General Education requirement only in the College of Humanities and Social Sciences. The student with no previous foreign language study will take FL 151-152 (three semester hours each) as prerequisites; the credits will not be applicable to any college or departmental requirements but may be counted as general electives in the total required for graduation. Generally, the student should schedule courses in accordance with previous school or practical background according to the prior experience:

1 year of high school, or equivalent, equals FL 151
2 years of high school, or equivalent, equals FL 152
3 years of high school, or equivalent, equals FL 251
4 years of high school, or equivalent, equals FL 252

Individual placement may be requested by the student, in which case the pertinent factors regarding preparation will be weighed by the department, with the student's individual requirements and the judgment of classroom instructors also being considered.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Humanities and Social Sciences degree if the department he/she is majoring in does not require a specific language.

CRITICAL LANGUAGE PROGRAM

This is a self-instructional course for the study of languages not taught in the classroom. The students are provided with texts, cassettes, and the services of a native speaker. A $40 per semester special fee for audio services and examinations is charged in addition to tuition. Professional teachers of language from other universities will test performance. Students interested must contact the coordinator at least one semester before taking the course. Each course is worth 3sh.

The following languages are available for study: Arabic, Chinese, Dutch, Modern Greek, Modern Hebrew, Classical Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Persian, Polish, Portuguese, Russian, Serbo-Croatian, Swahili, Swedish, Tagalog, Thai, Turkish, and Vietnamese. Sequence numbers CL491 through CL494 will be used to designate blocks I through IV, respectively, of the critical languages. For information, contact Dr. Victor S. Drescher, director of Critical Languages and Foreign Language Study Abroad Programs.

SPECIAL CREDIT PROGRAMS

College majors may be interested in the various Foreign Study Programs and Tours. Credits obtained through such arrangements normally are applicable toward a Humanities and Social Sciences degree. Also of interest are the college's credit-awarding IUP at Valladolid (Spain), IUP at Duisburg (Germany), and IUP at Nancy (France) proqrams, as well as the Summer Study in Jalapa (Mexico) Program. For information, contact Dr. Victor Drescher, Director, Foreign Languages Study Abroad Programs.

IUP at Valladolid: Through the Spanish and Classical Languages Department, the university has offered a spring semester of study at the University of Valladolid, Spain, for the past seventeen years. The participants live in private homes. For details and brochures, please contact Dr. Cruz Mendizabal, Department of Spanish and Classical Languages, or the director, Foreign Languages Study Abroad Programs.

IUP at Duisburg: IUP has a study abroad program at the University of Duisburg, West Germany. The program is open to German majors and other students having specific interest in a foreign study experience. Students must register for FL 100 and pay an administrative fee of $75 plus tuition per semester. For further information, contact the director, Foreign Languages Study Abroad Programs.

IUP at Nancy: IUP has established a study program with the University of Nancy, France. Two separate study programs are available. Program A is intended for those participants who have studied advanced French courses and for French majors. Program B is designed primarily for the non-major or for the student who wishes to enroll for just one semester. Participants in the Nancy program must register for FL 100 and pay an administrative fee of $75 plus tuition per semester. For details, contact Director, Foreign Languages Study Abroad Programs.

IUP - MEXICO SUMMER PROGRAM - The Spanish and Classical Languages Department of Foreign Languages sponsors a program of study in Spanish Language in Mexico. The program is located at Jalapa in the state of Veracruz, and the cost of the program includes transportation, complete room and board, insurance, tuition, etc. The student may earn up to six hours of undergraduate or graduate credit. Internship opportunities are available for students with fluency in Spanish. For a detailed brochure, please contact the director, Foreign Languages Study Abroad Programs.

PREPROFESSIONAL PROGRAMS

The College of Humanities and Social Sciences offers a preprofessional program in pre-law that prepares the student for application to a professional school. This is grounded in Social Sciences and Humanities and Business department(s) - Pre-law in Business, Criminology, Economics, English, History, Philosophy, or Political Science. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

Course work in the pre-law program centers upon a carefully developed interdisciplinary minor. For detailed guidance in pre-law, students should consult with the dean of Humanities and Social Sciences and/or the pre-law adviser in their major department.

INTERNSHIP PROGRAMS

Several departments have established programs under which students engage in off-campus supervised work experience for credit. During the past year, IUP students have worked in Harrisburg as aides to state legislators, with the Governor's Justice Commission and the Local Government Commission, and with the Investigations Division, Pennsylvania Department of Justice. Others have worked at correctional institutions in Pittsburgh, Greensburg, and Warrendale, as peer group counselors on the local campus, as an assistant to the Pennsylvania state Republican chairperson, as on-site guides at the United Nations, as workers on an Israeli kibbutz, and as student aides for the Department of Education, Puerto Rico. Other students have worked in the Pittsburgh federal probation office. Many students have worked with major political parties and candidates at the local and state level. At the county level, they have been attached to the offices of the county planner, the Common Pleas Court, coroner, treasurer, commissioners, and borough manager. Students have also worked in the Washington office of Pennsylvania, Congressmen and in many federal and international organizations in Washington as well.

For more information about specific internship programs, students should consult with the chairperson of the department in which the student is majoring.

STUDY ABROAD AND INTERNSHIPS

IUP offers study abroad and internship programs in Valladolid, Spain; Duisberg, Germany; Nancy, France; and Jalapa, Mexico. Students interested in participating in any of the semester or year abroad programs must register for FL 100. For further information, contact Dr. Victor S. Drescher, Director of the Foreign Language Study Abroad Programs.

MINOR in COMPARATIVE LITERATURE

Students electing a minor in Comparative Literature must complete fifteen credit hours of work in Comparative Literature courses, listed below, although EN345, Classical Literature, may be substituted for three of those credits. The minor hours may not exceed a total of nine in either department (EN-FL). In addition, the student will be expected to have completed the second-year sequence of a foreign language, or its equivalent, in order to qualify for the minor. Since, at present, only one course will be offered in any single semester, students who enroll in the minor should be aware that they will need five regular semesters to complete the sequence.

Required courses: 15 credits from the following:

EN/FL 391	Selected Works from the Medieval Period	3 sh
EN/FL 392	Renaissance/Baroque/Classical	3 sh
EN/FL 393	Romanticism	3 sh
EN/FL 394	Nineteenth-Century European Novel in Translation	3 sh
EN/FL 395	Selected Writers from Twentieth Century Europe	3 sh
EN/FL 396	The Literature of Emerging Nations	3 sh

For more information, contact Professor Jessie Bright in the English Department or Dr. Foster Jones in the French Department.

CRIMINOLOGY DEPARTMENT

ROBERT MUTCHNICK, CHAIRPERSON; AUSTIN, BOGAN, COHEN, MARTIN, McCAULEY, McNABB, MELODINI, MOYER, THOMAS, WEGENER, ZIMMERMAN

The Department of Criminology offers men and women who seek a career in the criminology field a broad liberal arts education supported by a professional education program. The degree offered is the Bachelor of Arts degree with a major in Criminology, under the College of Humanities and Social Sciences; also available are a Two-year Academic Diploma, an Associate of Arts degree, and a minor in Criminology.

The program in Criminology has a five-fold objective:

1. The education of students for employment and leadership in the expanding field of criminology.

2. The education of presently employed criminal justice personnel who recognize the need for raising their educational level.

3. The instruction of students who wish to acquire an understanding of the processes of criminal justice as a cultural part of their higher education.

4. The instruction of students who wish to prepare for graduate study and research in criminology.

5. A curriculum that provides an excellent foundation for students preparing for a career in law.

Nearly every level of government offers opportunities for professional careers in criminology. Employment opportunities normally exist in more than fifty federal agencies, including the Federal Bureau of Investigation, U.S. Secret Service, Bureau of Narcotics, Intelligence Division (IRS), Inspection Service (IRS), Alcohol Tobacco Tax Division (IRS), State Department Security, Atomic Energy Commission, and military investigative branches.

Both men and women will find employment opportunities in parole and probation work for federal, state, and local governments and institutional careers concerned with the custody and treatment of juveniles and adults at all levels of government. In addition, many police departments have specialized units dealing with juveniles, community relations, training, and research. Criminalistic laboratories provide another career area, and there are a wide variety of opportunities in traffic administration and investigative and security activities in the commercial and industrial fields.

Career opportunities are available also in research and teaching at the college and university level and in research divisions of agencies in the field of administration of justice.

BACHELOR OF ARTS in CRIMINOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Humanities: Foreign language III and IV

MAJOR: **36**
Required courses:

CR102	Survey of Criminology	3 sh
CR210	Criminology Law	3 sh
CR300	Complex Organization	3 sh
CR306	Research Methods	3 sh
CR400	Theoretical Criminology	3 sh
CR401	Contemporary Issues	3 sh

Controlled electives:

One course from list: CR451, 470, 482, 491	3sh
Five additional Criminology courses	15sh(1)

FREE ELECTIVES: (2) 36

TOTAL DEGREE REQUIREMENTS: 124

(1) No more than 6 sh of CR493: Internship may be applied to 36sh minimum in major.

(2) Students selecting a minor may apply no more than 15sh outside College of Humanities ( ) and Social Sciences without special approval.

BACHELOR OF ARTS in CRIMINOLOGY/Pre-Law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Humanities: Foreign language III and IV

MAJOR: **36**
Required courses:

CR102	Survey of Criminology	3 sh
CR210	Criminology Law	3 sh
CR300	Complex Organization	3 sh
CR306	Research Methods	3 sh
CR400	Theoretical Criminology	3 sh
CR401	Contemporary Issues	3 sh

Controlled electives:

One course from list: CR451, 470, 482, 491	3 sh
Five additional Criminology courses	15 sh(1)

OTHER REQUIREMENTS: Pre-law interdisciplinary minor **21**
At least one course from six areas:
Business: AD235, AG201, AG202
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH327
Political Science: PS358, PS359, PS361

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 124

(1) No more than 6 sh of CR493: Internship may be applied to 36sh minimum in major.

(2) Students selecting a minor may apply no more than 15sh outside College of Humanities and Social Sciences without special approval.

ASSOCIATE OF ARTS in CRIMINOLOGY (offered only at Punxsutawney)

GENERAL EDUCATION: 27

English: EN101, EN102		7sh
Mathematics: MA101 or substitute		3 sh
Natural Science: laboratory sequence		8 sh
Social Science: PC101, PS111, SO151		9 sh

MAJOR: 18

Required courses:

CR101	General Administration of Justice	3 sh
CR102	Survey of Criminology	3 sh
CR210	Criminology Law	3 sh
CR270	Juvenile Justice System	3 sh
CR283	Police Patrol Management	3 sh
CR291	Theory and Techniques of Interviewing	3 sh

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 60

MINOR in CRIMINOLOGY

MINOR: 18

Required courses:

CR102	Survey of Criminology	3 sh
CR210	Criminal Law	3 sh
CR300	Complex Organization	3 sh
CR306	Research Methods	3 sh
CR400	Theoretical Criminology	3 sh
CR401	Contemporary Issues	3 sh

ECONOMICS DEPARTMENT

DONALD A. WALKER, CHAIRPERSON; ASAMOAH, CROSS, DYAL, GARVIN, HOLT, HUFF, KARATJAS, MARTEL, RADAKOVIC, RADELL, STONEBRAKER, WARE

The Economics Department offers programs to meet the needs of IUP students in three general areas: a program that prepares students majoring in economics for graduate school or immediate employment; a program that prepares students to teach Economics on the high school level; and a pre-law program for Economics majors who wish to go to law school.

The program for Economics majors is designed for those who intend to pursue careers as economists in education, government, industry, finance, or commerce. The economist in today's world occupies an increasingly important position, and great opportunity exists for qualified people.

Degrees offered are the Bachelor of Arts in Economics and the Bachelor of Science in Education with a major in Social Sciences, concentrating in Economics.

The Department of Economics offers several concentrations in particular aspects of Economics. The concentrations are designed to equip students with the education and skills that will enable them to obtain a position in government or private business upon completion of the undergraduate degree. The department provides verification that students have completed a concentration, and they may also have the information recorded on their transcripts. These concentrations are not restricted to Economics majors. The concentrations available at present are

Competition and Public Policy
Economics of Government Affairs
International Economics
Labor Economics
Managerial Economics
Monetary Economics
Quantitative Economics

Detailed information regarding these concentrations may be obtained from the department chairperson.

Economics 101: Basic Economics may be taken in partial fulfillment of the Social Sciences segment of the university's General Education requirement. Economics 101 cannot be programmed by Economics majors or minors, by students enrolled in the College of Business, or by students in the College of Education who are contemplating teaching social science on the high school level. Instead, Economics 121: Principles of Economics I should be taken by these students, since it serves as a foundation for many advanced Economics courses. Students can receive credit toward graduation for either EC 101 or EC 121 but not both. The department will accept either EC121 or EC122 for General Education credit as a substitute for EC 101.

Students majoring in other fields are welcome to choose Economics courses among the upper-division electives. These courses are designed to aid the student in developing sophisticated insights into economic issues and are valuable in many ways, regardless of the student's ultimate vocation.

It is recommended that Economics majors take a minor in one of the other Social Sciences, in Business, or in Mathematics. A minor in Mathematics is strongly recommended for those whose future may include graduate work in Economics.

BACHELOR OF ARTS in ECONOMICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications:		52
Humanities: Foreign Language III and IV		
Social Science: EC121		
MAJOR:		27
Required courses:		
EC121	Principles of Economics I	* sh
EC122	Principles of Economics II	3 sh
EC305	Math for Economists I	3 sh
EC355	Statistics for Economists	3 sh
EC421	Macro Analysis	3 sh
EC422	Micro Analysis	3 sh
Controlled electives:		
Four other EC courses		12sh

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 45

TOTAL DEGREE REQUIREMENTS: 124

(1) MA121, MA123 or MA127 may be substituted for EC305

(2) MA214, MA217 or MA363 may be substituted for EC355

BACHELOR OF ARTS in ECONOMICS/Pre-law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: Foreign Language III and IV
Social Science: EC121

MAJOR: 27

Required courses:

EC121	Principles of Economics I	* sh
EC122	Principles of Economics II	3 sh
EC305	Math for Economists I	3 sh(1)
EC355	Statistics for Economists	3 sh
EC421	Macro Analysis	3 sh
EC422	Micro Analysis	3 sh

Controlled electives:
Four other EC courses 12 sh

OTHER REQUIREMENTS: Pre-law interdisciplinary minor 21
At least one course from six areas:
Business: AD235, AG201, AG202
Criminology: CR101, CR210, CR260
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH327
Political Science: PS358, PS359, PS361

FREE ELECTIVES: 24

TOTAL DEGREE REQUIREMENTS: 124

(1) MA121, MA123, or MA127 may be substituted for EC305
(2) MA214, MA217, or MA363 may be substituted for EC355

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCE EDUCATION/Economics Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Social Science: EC121, HI104, PC101

MAJOR: 30-39

Required courses — Economics Track

EC121	Principles of Economics I	* sh(1)
EC122	Principles of Economics II	3 sh
EC electives (not EC101)		9 sh(2)

Controlled electives — Social Sciences major		
Two courses in Geography		6 sh(3)
Two courses in History		6 sh(3)
Two courses in Political Science		6 sh(3)
Two courses in Sociology/Anthropology		6 sh(3)
One additional social science course		3 sh(3)
OTHER REQUIREMENTS:		**30**
Professional Education Sequence:		
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED455	Teaching of Social Science in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Test and Measurement	3 sh
FE302	History and Philosophy of American Education	3 sh
FREE ELECTIVES:		**12-3**
		TOTAL DEGREE REQUIREMENTS: 124

(1) Credit for EC121 is counted in the General Education requirements.
(2) MA121, 123, 127, 214, 217, or 363 may be substituted for one EC elective.
(3) Courses included among the General Education social science electives may reduce the ( ) number of courses required in this area.

MINOR in ECONOMICS

MINOR		**15**
Required courses:		
EC121	Principles of Economics I	3 sh
EC122	Principles of Economics II	3 sh
Three courses from EC200 or higher		9 sh

ENGLISH DEPARTMENT

JAMES GRAY, CHAIRPERSON; AGHBAR, BERLIN, BETTS, J. BRIGHT, L. BRIGHT, CAHALAN, COLLINS-STOCKTON, COOK, CRAIG, CUREY, J. DAVIS, DAY, EMERICK, FREUND, FRITZ, GEBHARD, F. GRAY, GRUBB, HALDEMAN, HARTWELL, HAYWARD, HAZLEY, B. HUDSON, S. HUDSON, HURLBERT, R.G. JOHNSON, KRASZEWSKI, KRUPNIK, McANDREW, D. McCLURE, McMANMON, NANIA, RAY, B. ROFFMAN, R. ROFFMAN, RUFFNER, R. SHAFER, SMITS, SWIGART, TANNACITO, R.L. THOMAS, WADDELL, WILLIAMSON, T.K. WILSON, WOODWORTH, YARUP

For individuals who want both a sound education and a program that prepares them for today's changing and highly competitive job market, the English Department at IUP offers a variety of practical programs.

Training in reading and writing is central to all courses of study in the field of English. All English majors are expected to develop their language skills to a professional level of competence, because these skills are in such short supply and great demand today.

Course choices depend upon the student's career goals. For those who plan to teach, there are two options: English Education or Communication Education. Both programs were recently revised, and both are highly successful in placing graduates in the teaching field.

For those who are planning a career in law or ancillary fields, the English Pre-Law program is challenging and effective.

And for those who want a flexible, interdisciplinary orientation, English Humanities offers a variety of traditional and nontraditional areas of specialization, permitting each student to tailor a program to suit his or her needs.

The department offers the following degrees: Bachelor of Arts in English, Bachelor of Science in English Education, and Bachelor of Science in Communication Education.

ENGLISH HUMANITIES

The English Department has instituted a new curriculum for the Humanities English major, one which emphasizes several of the traditional concerns of English literary study in nontraditional ways. Specifically, the student satisfies the literature requirements by taking preliminary courses which survey English and American literature and then choosing particular courses from each of five categories, each category reflecting a specific focus.

One category focuses upon literature as a "mode of awareness," a philosophic emphasis, and offers such courses as "The Metaphoric Perspective," "Symbol and Allegory," "The Oral Tradition," etc.

A second category views literature from an historical perspective and offers such courses as "The Puritan Mind in England and America," "The Renaissance," and "Romanticism."

A third category examines literature from a psychological point of view through such courses as "Myth in Literature," "Hero and Anti-Hero," and "The Literature of Alienation."

The fourth category deals with social considerations of perennial importance and offers such courses as "War in Literature," "Poverty and Class," and "Man in the Natural World."

The fifth category examines the literary output of a single major author: Chaucer, Shakespeare, Milton, or a major American author or authors.

A comprehensive exam measures each student's level of achievement with "Pass," "Distinction," or "Honors" noted on the student's departmental records.

Courses from other areas (Critical, Creative and Technical Writing, Speech, Film, Language, and Communication Studies) complement the literature program selected by the student with his or her adviser's assistance.

EDUCATION PROGRAMS

The English Department offers two programs leading to the Bachelor of Science degree: one in English Education and one in Communication Education. Graduates of these programs are prepared to teach in middle, junior high, and senior high schools. Job opportunities in these areas have risen significantly in the past few years.

The English Education majors receive all of the usual professional training, including practical experience in methods courses and student teaching, but they are also graduated with a thorough preparation in the subject matter areas of literature, language, and composition. Although most students choosing an English Education major will be fitted both by training and desire for the secondary school classroom, those who opt not to teach will find that their speaking and writing skills can be useful to the media, governmental services, and industries.

Because today's public schools must prepare young people to communicate effectively in a variety of ways, the English Department offers Communication Education, a degree program which trains students to teach in at least one area in addition to traditional literature and composition. Each student in this major takes basic courses in literature, composition, language, speech, media, and reading and then concentrates in one of six specialties: literature, linguistic science, writing, speech, theater, and non-print media.

Program requirements are available at the English Department office. Requirements include a portfolio of written work, faculty evaluations, and an annual review of progress.

PRE-LAW ENGLISH

One can hardly imagine a successful lawyer who does not possess excellent skills in writing and speaking and who is not able to analyze a problem and explain its solution in clear, logical terms. Pre-Law English prepares the student especially well in these areas and provides the skills and knowledge needed to do well in the law school admissions examination.

In addition, the English Department offers at regular intervals a section of Advanced Composition designed to fit the needs of pre-law students. Many graduates have had successful internship experiences in the offices of practicing attorneys and government agencies.

MINORS IN ENGLISH DEPARTMENT

To minor in English, 15 semester hours in English are required beyond the General Education requirement of EN 101, EN102, and EN201.

To minor in speech, 18 semester hours in Speech courses are required.

To minor in Comparative Literature, 18 semester hours of Comparative Literature hours are required.

ENGLISH AS A SECOND LANGUAGE (ESL) PROGRAM

The English Department English as a Second Language curriculum consists of a sequence of courses: EN150, 100(ESL), 101(ESL), 102(ESL), and 201(ESL), in which a special curriculum, materials, and methods of instruction are used to allow non-native students of English the opportunity to gain complete language proficiency for academic success and personal understanding of the second culture.

These ESL courses and sections satisfy the same university and college requirements as the non-ESL course equivalents. Only non-native students are permitted to enroll in English course sections designated "ESL." Placement of all non-native students in the ESL courses and sections is determined by the results of the English Department ESL Screening/Placement Test.

THE WRITING CENTER

In conjunction with the Learning Center, the English Department maintains a writing center, which all students are encouraged to use. Instructors may recommend students to the center, or students may seek help on their own. Call the English Department for information on hours of operation.

BACHELOR OF ARTS in ENGLISH

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
English: EN101, EN102, EN210
Humanities: Foreign Language III and IV

MAJOR: 36
Required courses:

EN211	English Literature to the Restoration	3 sh
EN212	English Literature from the Restoration to 1900	3 sh
EN213	American Literature: Beginnings to Present	3 sh

Controlled electives:

One course from list A: EN350, 351, 352, 353	3 sh
One course from list B: EN360, 361, 362, 363	3 sh
One course from list C: EN370, 371, 372, 373	3 sh
One course from list D: EN380, 381, 382, 383	3 sh
One course from list E: EN208, 209, 310, 311 312, 313, 329, 330, 331, 332, 333, 334	3 sh
One course from list F: EN220, 221, 320, 321, 322	3 sh
One course from list G: EN 340, 341, 342, 343	3 sh
Two courses from list H: Any two Special Topics courses (EN 481) or any two courses from Lists A through G above, or a combination of one Special Topics (EN 481) and one course from Lists A through G above, or, the Senior Seminar (EN 480) in combination with either any Special Topics (EN 481) or any course from Lists A through G above.	6 sh(1)

OTHER REQUIREMENTS: 0
Comprehensive Examination at conclusion of senior year

FREE ELECTIVES: 36

TOTAL DEGREE REQUIREMENTS: 124

(1) Any EN481 course must have prior approval from department chair if it is to apply to the student's major.

BACHELOR OF ARTS in ENGLISH/Pre-law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
English: EN101, EN102, EN210
Humanities: Foreign Language III and IV

The degree program in German for International Trade provides an excellent way to combine language proficiency and cultural awareness in German with professional training in business. With this undergraduate background, students may enter M.B.A. degree programs and pursue careers in international business and trade. Study abroad for one or two semesters is strongly urged and is an integral part of the program. Qualified students may also choose to participate in internship programs with German-based corporations and financial institutions.

General Education Language Requirements

Students in the College of Natural Sciences and Mathematics and in the College of Humanities and Social Sciences must pass the intermediate sequence of a foreign language (GM251 and GM252) or demonstrate by the CLEP exam in German that they have acquired the equivalent proficiency level. Students from the other colleges may elect to take German (any appropriate level) to fulfill the humanities requirement. Any student who chooses German can meet the requirement through enrollment in the traditional, the accelerated, or the intensive six-credit track (DILM), which provides maximum opportunity for conversational practice in small groups under the direction of trained assistants.

Study Abroad

The Department of German encourages all students who study German at IUP to consider study abroad for one or two semesters. German majors are strongly urged to study two semesters or one academic year at a German university. To provide this opportunity at a relatively modest cost, the university has arranged an exchange of students between Duisburg University and IUP. By participating in this or other approved programs, students can earn up to eighteen hours per semester. For further information regarding the cost and application procedures, contact the director of Study Abroad Programs.

Minor in German

Students completing eighteen credits beyond GM 152 will be recognized as having minored in German. Nine of the twelve credits must be taken at the 300 level with only three credits from the conversation sequence, GM 221, 222, 321, 322. This achievement will be noted on the student's transcript and thus provide more career flexibility.

BACHELOR OF ARTS in GERMAN

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **46**
Humanities: included in major

MAJOR: **36**

Required courses:		
GM221	Conversation III	2 sh
GM222	Conversation IV	2 sh
GM321	Advanced Conversation I	1 sh
GM322	Advanced Conversation II	1 sh
GM251	German III	3 sh
GM252*	German IV	3 sh(1)
GM351	Advanced German I	3 sh
GM352	Advanced German II	3 sh
GM361	Development of German Culture and Literature I	3 sh
GM362	Development of German Culture and Literature II	3 sh
Controlled electives:		
Other GM electives (advanced levels)		9 or 12 sh

MAJOR: 37

Required courses:

EN209	Language of Media	3 sh
EN214	The Novel	3 sh
EN215	Poetry	3 sh
EN216	Short Fiction	3 sh
EN217	Drama	3 sh
EN220	Advanced Composition I	3 sh
EN310	Oral Communications	3 sh
EN329	The History of the English Language	1 sh
EN330	The Structure of the English Language	3 sh

Controlled electives: One teaching specialty 12 sh

Literature: EN211, 212, 213, 340, 341, 350's, 360's 370's, 380's, 480
Linguistics: EN331, 332, 333
Speech: EN311, 312, 313
Theater: Any four TH courses
Writing: EN221, 320, 321, 322, 324 (required)

OTHER REQUIREMENTS: 30

Professional Education Sequence

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED452	Teaching of English and Communication in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 5

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in ENGLISH EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

English: EN101, EN102, EN210
Fine Arts: TH101
Humanities: Foreign Language III and IV
Social Science: HI 104, PC101

MAJOR: 37

Required courses:

EN214	The Novel	3 sh
EN215	Poetry	3 sh
EN216	Short Fiction	3 sh
EN217	Drama	3 sh
EN220	Advanced Composition I	3 sh
EN310	Oral Communications	3 sh
EN324	Teaching and Evaluating Writing	3 sh
EN329	The History of the English Language	1 sh
EN330	The Structure of the English Language	3 sh

Controlled electives: Any four additional courses from lists		12 sh
Literature: EN211, 212, 213, 340, 341, 350's, 360's, 370's, 380's, 480		
Linguistics: EN331, 332, 333		
Speech: EN311, 312, 313		
Theater: Any four TH courses		
Writing: EN221, 320, 321, 322, 324 (required)		
OTHER REQUIREMENTS:		**30**
Professional Education Sequence		
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED452	Teaching of English and Communication in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh
FREE ELECTIVES:		**5**
	TOTAL DEGREE REQUIREMENTS:	**124**

DEPARTMENT OF FRENCH

ROBERT L. WHITMER, CHAIRPERSON; FAUST, FISEL, HENRY, JONES, LISCINSKY, McCREARY, OP DE BEECK

The Department of French offers a varied curriculum designed to provide not only basic language instruction but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the French major, the department has three degree programs: B.S. in Secondary Education, B.A. in Liberal Arts, and the B.A. in French for International Trade. The latter degree program provides solid undergraduate training preparatory to an M.B.A. in International Marketing and Finance.

Students majoring in French will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Francophone countries. They will also gain some knowledge of the linguistic development of the language throughout the centuries. French majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Natural Sciences and Mathematics and the College of Humanities and Social Sciences must pass the intermediate sequence of a foreign language (FL251 and FL252) or demonstrate that they have somehow acquired the equivalent proficiency level. Students from the other colleges may choose to take French (any appropriate level) to fulfill a Humanities elective. Any student who chooses French has an option to enroll in the traditional, three-credit per semester courses or the intensive, six-credit track (DILM) which provides maximum opportunity for conversational practice in small groups under the direction of trained assistants.

Placement/Exemption

The student with no previous French study will take FR 151 and 152 or FR101 as a prerequisite. To remain enrolled in these prerequisite courses, students must take the French placement examination scheduled half-way through the drop/add period. The placement exam may be taken also by students in other French courses and by those planning for early registration. Ask instructor or call department office for details. No student judged to be a native speaker of French will be allowed to enroll in any course below the 300 level.

Study Abroad - Nancy, France

IUP has established a study abroad center in Nancy, France. All majors are encouraged to participate in the Study Abroad Program, especically those seeking the International Trade Degree. Students have an option to participate in a full year or one semester program (fall or spring). A six-week summer session has been added to the options available. Nonmajors may be accepted into any of the programs but must enter the language courses offered in the Cours pour etrangers (Courses for Foreign Students). All credits are evaluated by the department as transfer credits. For further information regarding the cost and application procedures, contact the director of Study Abroad Programs.

Internships

The Department of French, through contacts with certain French companies and through its affiliation with the ICN (Institut Commercial de Nancy), is able to place summer interns in Paris and other sites in France. The internship (generally 6 to 12 credits) is viewed as a highly desirable culminating experience following study in Nancy. For further information, contact the Director of Study Abroad Programs.

BACHELOR OF ARTS in FRENCH

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			**46**
Social Science: HI 101-102			
MAJOR:			**36**
Required courses:			
FR221	French Conversation III	2 sh	
FR222	French Conversation IV	2 sh	
FR321	Advanced Conversation I	1 sh	
FR322	Advanced Conversation II	1 sh	
FR251	French III	3 sh	
FR252	French IV	3 sh	
FR351	Advanced French Language I	3 sh	
FR352	Advanced French Language II	3 sh	
FR361	Development of French Culture and Literature I	3 sh	
FR362	Development of French Culture and Literature II	3 sh	
Controlled electives:			
Other French electives:		12 sh	
OTHER REQUIREMENTS:			**0**
FREE ELECTIVES:			**42**
		TOTAL DEGREE REQUIREMENTS:	**124**

BACHELOR OF ARTS in FRENCH FOR INTERNATIONAL TRADE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **47**

English: (recommend EN201 in Europe)
Humanities: French III and IV included in major
Fine Arts: (recommend in Europe)
Mathematics: MA121
Social Science: EC121, PS101, HI102, PC101
Science/Math elective: MA214

MAJOR: **36**

Required courses:

FR221	French Conversation III	2 sh
FR222	French Conversation IV	2 sh
FR321	Advanced Conversation I	1 sh
FR322	Advanced Conversation II	1 sh
FR251	French III	3 sh
FR252	French IV	3 sh
FR253	Intermediate Composition and Conversation	3 sh
FR254	Commercial French	3 sh
FR351	Advanced French Language I	3 sh
FR352	Advanced French Language II	3 sh
FR361	Development of French Culture and Literature I	3 sh
FR362	Development of French Culture and Literature II	3 sh

Controlled electives:

Two additional FR electives (advanced levels) 6 sh(1)

OTHER REQUIREMENTS: Business Sequence: **36**

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Introduction to Management Information Systems	3 sh
FI310	Finance I	3 sh
MG311	Human Behavior in Organizations	3 sh
MG360	Management and Production Concepts	3 sh
MG495	Business Policy	3 sh
MK320	Principles of Marketing	3 sh

FREE ELECTIVES: **5**

TOTAL DEGREE REQUIREMENTS: 124

(1) Most students earn additional language credits (up to 18) in semester or year abroad.

BACHELOR OF SCIENCE IN EDUCATION in SECONDARY FRENCH EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **46**

Social Science: HI104, PC101
Junior Standing, Speech/Hearing Test

MAJOR: 33

Required courses:

FR221	French Conversation III	2 sh
FR222	French Conversation IV	2 sh
FR321	Advanced Conversation I	1 sh
FR322	Advanced Conversation II	1 sh
FR251	French III	3 sh
FR252	French IV	3 sh(1)
FR351	Advanced French Language I	3 sh
FR352	Advanced French Language II	3 sh
FR361	Development of French Culture and Literature I	3 sh
FR362	Development of French Culture and Literature II	3 sh

Controlled electives:

Other FR electives	9 sh

OTHER REQUIREMENTS: Professional Education sequence 30

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED453	Teaching of Foreign Languages in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 124

(1) FR253 may be substituted for FR252.

MINOR IN FRENCH

21

Required courses:

FR 251-252	French III and IV	6 sh
FR 221-222	French Conversation III and IV	4 sh
FR 351-352	Advanced French Language I and II	6 sh
FR 321-322	Advanced Conversation I and II	2 sh
FR 361	Development of French Culture and Lit I	3 sh

ELEMENTARY EDUCATION CONCENTRATION

Required courses: 18

FR221-222	French Conversation III and IV	4 sh
FR321-322	Advanced Conversation I and II	2 sh
FR251-252	French III and IV	6 sh
FR351-352	Advanced French Language I and II	6 sh

A student in Elementary Education interested in bilingual elementary teaching may, through special scheduling arrangements, increase the concentration in French to include foreign study and foreign child-centered internship experience.

GEOGRAPHY AND REGIONAL PLANNING DEPARTMENT

RUTH I. SHIREY, CHAIRPERSON; BALLAS, BEGG, FORBES, KULKARNI, MILLER, TEPPER, ZACUR

GEOGRAPHY has several traditions of study. Two of the more important traditions are the study of relationships between man and environment or the ecological tradition and the study of spatial organization, which involves the way man uses space on the earth's surface. In both traditions the focus is on understanding regions of the world and the interactions within and between them. Geographers make important contributions to the understanding of all aspects of man's use of and impact on the earth's surface.

REGIONAL PLANNING involves preparing for the future. The demands and effects of a large and growing population require that land use, resource use, settlement patterns, transportation systems, and economic activity be planned. Regional planning is concerned with the social, locational, and environmental aspects of these planning decisions. In the 1980s, economic development has become an important focus.

GEOGRAPHY and REGIONAL PLANNING are in the same department because "Planning is the art of which geography is the science."

Employment opportunities for geographers and regional planners are good. Students will find a wide variety of positions in government, business, industry, planning, and education available. Environmental and locational knowledge gained in the department's programs provide skills needed in the job market. Students interested in obtaining additional career information should visit the departmental office in Room 2, Leonard Hall.

Three degree programs are offered by the department: (1) Bachelor of Arts in Geography; (2) Bachelor of Science in Regional Planning; and (3) Bachelor of Science in Social Science Education with a concentration in Geography.

A minor in geography is appropriate for majors in all other fields of the natural and social sciences. Students of business also find this minor relevant. A minor consists of a minimum of fifteen semester hours in geography. A student may elect any combination of courses for the minor. The department suggests that students take the core program if they anticipate doing graduate work in geography. Students might also consider concentrating in one of the areas of the field, such as physical/environmental, human/cultural, research and techniques, or regional geography.

BACHELOR OF ARTS in GEOGRAPHY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Humanities: Foreign Language 111 and 1V
Mathematics: MA217 recommended
Natural Science: GS101/102, 103/104 or GS121/122, 131/132
Science/Math electives: CO110 or CO200 recommended

MAJOR: 36

Required courses:

GE230	Cultural Geography	3 sh
GE241	Physical Geography	3 sh
GE312	Research in Geography and Planning	3 sh
GE411	Geography: Thought and Philosophy	3 sh

Controlled electives:

One course from GE251-257
One course from GE313-314
Six courses (18cr) from any other GE courses

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 36

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE in REGIONAL PLANNING

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Humanities: Foreign Language III and IV
Mathematics: MA217 recommended
Natural Science: GS101/102, 103/104, or GS121/122, 131/132 recommended
Social Science: EC121, PS111, SO151 recommended
Science/Math electives: CO110 or CO200

MAJOR: 36

Required courses:

GE312	Research in Geography and Planning	3 sh
GE360	Introduction to Planning	3 sh
GE361	Planning: Basic Study and Analysis	3 sh
GE462	Planning: Development, Principle, and Theory	3 sh
GE463	Planning: Design	3 sh
GE464	Land Use Policy	3 sh

Controlled electives:

One course from GE313-314	3 sh
Three courses from GE230, 231, 241, 331, 335, 336, 341, 342	9 sh
Two courses from GE313 or 314, 332, 415, 440	6 sh

OTHER REQUIREMENTS: 15-21

Interdisciplinary minor (21sh) or
Minor in approved field (15-21sh)
Internship (GE498) strongly recommended.

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCE EDUCATION/Geography Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			52
Social Science: GE101, GE102, HI104, PC101			
MAJOR:			42
Controlled electives: Geography concentration			
One course from GE231 or GE323		3 sh	
One course from GE341 or GE342		3 sh	
Two courses from GE251, 252, 253, 254, 255, 256, 257		6 sh	
One additional GE course		3 sh	
Controlled electives: Social Science major			
Two courses in Economics		6 sh(1)	
Two courses in History		6 sh(1)	
Two courses in Political Science		6 sh(1)	
Two courses in Sociology/Anthropology		6 sh(1)	
One additional social science course		3 sh(1)	
OTHER REQUIREMENTS:			30
Professional Education Sequence			
CM301	Instructional Media	3 sh	
ED242	Pre-student Teaching I	1 sh	
ED342	Pre-student Teaching II	1 sh	
ED441	Student Teaching	12 sh	
ED442	School Law	1 sh	
ED455	Teaching of Social Sciences in the Secondary School	3 sh	
EP302	Educational Psychology	3 sh	
EP377	Educational Tests and Measurement	3 sh	
FE302	History and Philosophy of American Education	3 sh	
FREE ELECTIVES: (1)			0

(1) Courses included among the General Education social science electives may reduce the number of courses required in this area and permit free electives.

TOTAL DEGREE REQUIREMENTS: 124

DEPARTMENT OF GERMAN

HAROLD M. SOMMER, CHAIRPERSON; BRODE, READY, SULLIVAN, VOELKER

The Department of German offers three degree programs: the B.A. in German, the B.A. in German for International Trade, and the B.S. in Ed. in Secondary German Education.

While majoring in the German Department, students will acquire proficiency in all phases of the language and develop an understanding and appreciation of the history, culture, and literature of the German-speaking countries. They will also gain knowledge of the linguistic development of the language throughout the centuries. German majors may look forward to rewarding careers in teaching, government, journalism, foreign trade, tourism, business, and librarianship.

MAJOR: 36

Required courses:

EN211	English Literature to the Restoration	3 sh
EN212	English Literature from the Restoration to 1900	3 sh
EN213	American Literature: Beginnings to Present	3 sh

Controlled electives:

One course from list A: EN350, 351, 352, 353	3 sh
One course from list B: EN360, 361, 362, 363	3 sh
One course from list C: EN370, 371, 372, 373	3 sh
One course from list D: EN380, 381, 382, 383	3 sh
One course from list E: EN208, 235, 310, 311 312, 313, 329, 330, 331, 323, 333, 334	3 sh
One course from list F: EN220, 221, 222, 223, 321, 324	3 sh
One course from list G: EN 340, 341, 342, 343	3 sh
Two courses from list H: Any two Special Topics courses (EN 481) or any two courses from Lists A through G above, or a combination of one Special Topics (EN 481) and one course from Lists A through G above, or the Senior Seminar (EN 480) in combination with either any Special Topics (EN 481), or any course from Lists A through G above.	6 sh(1)

OTHER REQUIREMENTS: Pre-law interdisciplinary minor

At least one course from six areas: 21

Business: AD235, AG201, AG202
Criminology: CR101, CR210, CR260
Economics: EC121, EC122, EC332
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH327
Political Science: PS358, PS359, PS361

Comprehensive Examination at conclusion of senior year

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 124

(1) Any EN481 course must have prior approval from department chair if it is to apply to the student's major.

BACHELOR OF SCIENCE IN EDUCATION in COMMUNICATIONS EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

English: EN101, EN102, EN210
Fine Arts: TH101
Humanities: Foreign Language III and IV
Social Science: HI 104, PC101

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 42

TOTAL DEGREE REQUIREMENTS: 124

(1) GM253 may be substituted for GM252*.

BACHELOR OF ARTS in GERMAN FOR INTERNATIONAL TRADE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 47

English: recommend EN201 in Europe
Fine Arts: recommend in Europe
Humanities: Foreign language included in major
Mathematics: MA121
Social Science: EC121
Science/Math elective: MA214

MAJOR: 36

Required courses:

GM221	Conversation III	2 sh
GM222	Conversation IV	2 sh
GM321	Advanced Conversation I	1 sh
GM322	Advanced Conversation II	1 sh
GM251	German III	3 sh
GM252	German IV	3 sh
GM253	Intermediate Composition and Conversation	3 sh
GM254	Business German	3 sh
GM351	Advanced German I	3 sh
GM352	Advanced German II	3 sh
GM361	Development of German Culture and Literature I	3 sh
GM362	Development of German Culture and Literature II	3 sh

Controlled electives:

Two additional GM electives (advanced levels) 6 sh(1)

OTHER REQUIREMENTS: Business Sequence: 36

AD235	Introduction to Business Law	3 sh
AD321	Business and Interpersonal Communications	3 sh
AG201	Accounting Principles I	3 sh
AG202	Accounting Principles II	3 sh
EC122	Principles of Economics II	3 sh
QB215	Business Statistics	3 sh
IM241	Introduction to Management Information Systems	3 sh
FI310	Finance I	3 sh
MG311	Human Behavior in Organizations	3 sh
MG360	Management and Production Concepts	3 sh
MG495	Business Policy	3 sh
MK320	Principles of Marketing	3 sh

FREE ELECTIVES: 5

TOTAL DEGREE REQUIREMENTS: 124

(1) Most students earn additional language credits (up to 18) in semester study abroad.

BACHELOR OF SCIENCE IN EDUCATION in SECONDARY GERMAN EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 46
Humanities: included in major
Social Science: HI104, PC101

MAJOR: 33

Required courses:

GM221	Conversation III	2 sh
GM222	Conversation IV	2 sh
GM321	Advanced Conversation I	1 sh
GM322	Advanced Conversation II	1 sh
GM251	German III	3 sh
GM252	German IV	3 sh(1)
GM351	Advanced German I	3 sh
GM352	Advanced German II	3 sh
GM361	Development of German Culture and Literature I	3 sh
GM362	Development of German Culture and Literature II	3 sh

Controlled electives:

Other GM electives		9 sh

OTHER REQUIREMENTS: Professional Education Sequence 30

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED453	Teaching of Foreign Languages in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 124

(1) GM253 may be substituted for, or taken in addition to GM252.

HISTORY DEPARTMENT

JOHN F. KADLUBOWSKI, CHAIRPERSON; CASHDOLLAR, FERGUSON, FRICKE, GALLANAR, GOODRICH, HATFIELD, HUNTER, LANDON, LEHMAN, MARCUS, MASTRO, MILLER, MOORE, OLIVER, RIFE, SMITH, VOGEL, WILEY

Programs in history are designed to give both those who major in history in the College of Humanities and Social Sciences and those who concentrate in history in the College of Education an opportunity to study in some depth the past story of peoples and their world. Degrees offered by the History Department are the Bachelor of Arts in History and the Bachelor of Science in Education with a major in Social Studies, concentrating in history. The first program is under the College of Humanities and Social Sciences, and the second is under the College of Education.

The history student will find that the program is excellent preparation for government service, for pre-law training, for broad business opportunities, for work in varied fields of journalism, for archival positions, and for teaching. Not only the story of the people of the United States but also that of other peoples is covered, in the belief that historical understanding is essential for the future of mankind.

Requirements for the degree of Bachelor of Arts in History are thirty semester hours in history. Requirements for the degree of Bachelor of Science in Education with a major in Social Studies, concentrating on history, are a minimum of fifteen semester hours in history within the forty-two semester hours required for social science certification. The requirement for a minor in history is fifteen semester hours. For all history programs, courses in history in General Education are applicable. Although there are no prerequisites to history courses, all programs should be planned with an adviser. Every major and concentrate in history will be advised by History Department staff members.

Admission to History 482 and 483, initiation in the local chapters of Phi Alpha Theta and Pi Gamma Mu, participation in study tours and study abroad programs, and other activities should be investigated by every history student. The department is committed to the idea of a broad education.

BACHELOR OF ARTS in HISTORY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Humanities: Foreign Language III and IV, (required), HI101 (recommended)
Social Science: HI102 and HI104 recommended

MAJOR: **30**
Controlled electives:
HI courses to total 30 credits with recommendation of

HI101	History of Civilization I	* sh
HI102	History of Civilization II	* sh
HI103	History of the United States and PA I	3 sh
HI104	History of the United States and PA II	* sh
HI200	Introduction to History	3 sh

OTHER REQUIREMENTS: **0**

FREE ELECTIVES: **42**

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in HISTORY/Pre-law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**
Humanities: Foreign Language III and IV (required), HI101 (recommended)
Social Science: HI102 and HI104 recommended

MAJOR: **30**
Controlled electives:
HI courses to total 30 credits with recommendation of

HI101	History of Civilization I	* sh
HI102	History of Civilization II	* sh
HI103	History of the United States and PA I	3 sh
HI104	History of the United States and PA II	* sh
HI200	Introduction to History	3 sh

OTHER REQUIREMENTS: Pre-law Interdisciplinary Minor 21
At least one course from each area
Business: AD235, AG201, AG202
Criminology: CR101, CR210, CR260
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
Philosophy: PH101, PH222, PH327
Political Science: PS358, PS359, PS361

FREE ELECTIVES: 21

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCE EDUCATION/History Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: HI101 recommended
Social Science: HI104 and PC101 (required), HI102 (recommended)

MAJOR: 42

Controlled electives: History Concentration		
Five courses in History		15 sh
Controlled electives: Social Science majors		
Two courses in Economics		6 sh(1)
Two courses in Geography		6 sh(1)
Two courses in Political Science		6 sh(1)
Two courses in Sociology/Anthropology		6 sh(1)
One additional course in social science		3 sh(1)

OTHER REQUIREMENTS: 30

Professional Education Sequence		
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED455	Teaching of Social Sciences in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: (1) 0

(1) Courses included among the General Education social science electives may reduce the number of courses required in this area and permit free electives.

TOTAL DEGREE REQUIREMENTS: 124

INDUSTRIAL AND LABOR RELATIONS DEPARTMENT

JAMES F. BYERS, CHAIRPERSON; GATES, GAYLOR, McPHERSON, MORAND, SEDWICK

The Industrial and Labor Relations Department offers a graduate program within the College of Humanities and Social Sciences leading to the degree of Master of Arts in Industrial and Labor Relations. The forty-two semester hour program consists of a required core of twenty-seven semester hours, including an elective thesis and elective course offerings totaling fifteen semester hours. Internships are available and strongly encouraged.

The Industrial and Labor Relations program is multidisciplinary, combining analytical and human relations skills with knowledge drawn from social sciences and business disciplines. The degree is designed to prepare professional industrial and labor relations practitioners in public and private management, unions, neutral agencies, government agencies, and arbitration panels. It has as a special emphasis labor relations in the public sector.

While the department does not offer course work leading to an undergraduate major or degree, it does offer several undergraduate courses which are open to students of any major or college.

INTERNATIONAL STUDIES

CENTER FOR INTERNATIONAL STUDIES
ROBERT L. MORRIS, DIRECTOR

Degree programs in International Studies are offered in both the College of Humanities and Social Sciences (Bachelor of Arts) and the College of Education (Bachelor of Science in Education). Both degrees are interdisciplinary and, consequently, draw upon the faculty and course offerings of many other departments. The course selection is broad enough to prepare the student for any one of a great variety of career opportunities. The Bachelor of Arts program is designed for the specialist who is interested in a professional career; the Bachelor of Science is designed to certify the graduate to teach world cultures or any of the social sciences in the public schools.

B.A. Program

Beyond the General Education courses required of all students in the university, the requirements for the degree of Bachelor of Arts in International Studies are as follows:

1. The student must build an interdisciplinary sequence of fifteen semester hours by taking an introductory or comparative international course from each of five social science disciplines. This selection depends upon the goal of the major and should be determined in consultation with adviser and or the director of the Center for International Studies.

2. The student should complete a specialization sequence in the economic and political systems of another culture which must include a study of language, literature, history, and geography of that region. This specialization sequence must include at least fifteen semester hours. Currently, three specializations are offered: Soviet Studies, the Far East, and Latin America. However, students interested in Africa or the Middle or Near East may elect interdisciplinary courses focusing on the developing nations. It is also possible to build a program centering on the Atlantic community of nations' international trade.

Specialization must include work in at least three disciplines. The student is expected to have completed the intermediate language sequence of the appropriate language in the General Education requirements, so that no credit towards specialization is given for language courses numbered below the 300 level.

Minor in International Studies

A minor in International Studies consists of meeting the requirements listed under (1) above. The curriculum of the Center for International Studies is flexible enough that the student can plan a program to match his interests.

Additional Opportunities for Study

The Center for International Studies offers many important opportunities beyond the required curriculum. For example, there are programs enabling the student to travel and study abroad. The major is strongly encouraged to do so. The center offers financial advice and is prepared to adjust the curriculum to facilitate study abroad. The university sponsors an annual summer study tour of Europe. A variety of programs enable the student to spend a year abroad. The Center for International Studies in cooperation with Georgetown University in Washington, D.C., administers IUP's participation in the International Student Exchange Program (ISEP). This program enables IUP students to choose from more than 300 universities around the world so that the specialized interests of any student can be accommodated quite readily. Students may also exchange with one of the seventy U.S. universities participating in the National Student Exchange coordinated by the Center for International Studies.

JOURNALISM DEPARTMENT

CRAIG G. SWAUGER, CHAIRPERSON; DeGEORGE, HEILMAN, JESICK, RUSSELL, TRUBY

Students interested in a career in advertising, both media and industrial journalism, or public relations should enjoy this innovative, flexible program. The journalism major combines journalism elective courses, the student's choice of a variety of courses from other university departments, plus internships which provide on-the-job experience.

The IUP journalism major is flexible for the individual student, who decides, with an adviser, what directions his or her education will take for a mass communication career. The two sequences offered are News-Editorial and Public Relations.

A student wishing to enter the program becomes a Journalism major in the College of Humanities and Social Sciences. Then, the student chooses an individual program within a large group of elective journalism courses, plus a much larger group of courses from various other areas of the university.

A student who completes the major graduates with a B.A. in journalism. Because journalism itself covers all areas of life, the journalism major covers many areas of study preparation. There are only four required courses, so the student is free to mold the program to his/her own special interests through both major and free electives.

The journalism major will use journalism courses to fulfill the minimum of thirty hours required for the major. All journalism majors must complete the intermediate sequence of a foreign language. This may be done in one of three ways: by examination, by earning credit in third and fourth semesters of a foreign language, or by completing four semesters of a new language. If the last procedure is used, the two beginning foreign language courses may be applied as free electives to the total number of credits needed for graduation.

COURSE SEQUENCE

The journalism faculty offers the following operational policy for its course sequence and prerequisites. The basic idea is for students to take Level I courses prior to Level II courses, etc. We ask that special attention be given to course prerequisites to avoid scheduling students without proper experience into courses. We do retain flexibility of waiving sequence and prerequisites in individual cases.

LEVEL I

JN 105 Journalism & Mass Media (required for all journalism majors)
JN 105 is the initial course in the major and the general survey elective course for nonmajors. If they have the prerequisites and if enrollment openings permit, nonmajors are welcome into advanced journalism courses.

JN 106 Basic Journalistic Skills (required for all journalism majors)

JN 120 Journalistic Writing (required for all journalism majors)

LEVEL II

JN 337 Editing
JN 321 Feature Writing
JN 343 History of the American Press
JN 344 Issues and Problems
JN 327 Design, Layout and Production
JN 338 News Analysis
JN 223 Photojournalism
JN 326 Public Relations I
JN 328 News Reporting (all majors in Journalism)
JN 345 Sports Journalism
JN 351 Science and Environ. Reporting
JN 393 Document Design I
JN 391 Presentation Making
JN 349 Public Affairs Reporting

LEVEL III

JN 346 Advanced Reporting
JN 348 Editorial Page
JN 323 Management
JN 390 Public Relations II
JN 394 Document Design II
JN 347 Journalism Law
JN 482 Independent Study
JN 493 Internship
JN 350 Advertising Writing
JN 392 Problem Solving in PR

MINOR COURSES OR FREE ELECTIVES

A number of departments cooperate to make journalism study at IUP a very broad experience. These courses may be considered for dual major, a minor program(s), or as electives.

With the assistance of an adviser, a student may develop a program by choosing from the following electives. Electives shown here have pre-authorization. Any other elective requires adviser approval in writing.

Art: AR218, AR455
Business: AD101, AD321, DE333, MG300, MG401
Marketing: MK320, MK321, MK420, MK421, MK433
Communications Media: CM271, CM404, CM444, CM445, CM451
English: EN208, EN209, EN220, EN221, EN310, EN311, EN322
History: HI368, HI346, HI362, HI363, HI364
Philosophy: PH101, PH222, PH323
Political Science: PS111, PS280, PS285, PS298, PS351, PS352, PS354, PS359, PS370, PS371, PS251, PS356, PS361, PS362
Computer Science: C0200
Educational Psychology: EP304
Criminology: CR101, CR102, CR295
Economics: EC241, EC283, EC332, EC333
Psychology: PC310, PC320, PC330, PC420, PC371
Sociology: SO231, SO334, SO332, SO339, SO340, SO455

BACHELOR OF ARTS in JOURNALISM

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Humanities: foreign Language III and IV

MAJOR: **30**

Required courses:

JN105	Journalism and the Mass Media	3 sh
JN106	Basic Journalistic Skills	3 sh
JN120	Journalistic Writing	3 sh
JN328	News Reporting	3 sh

Controlled electives:

Other JN courses 18 sh(1)

OTHER REQUIREMENTS: **42-0**

Department recommends a planned program of dual major, minor(s), or electives with special consideration of the pre-approved courses listed. (2) (3)

FREE ELECTIVES: **0-42**

TOTAL DEGREE REQUIREMENTS: 124

(1) Maximum of 6 credits Internship applied to major.
(2) Students may take no more than 15sh outside the College of Humanities and Social Sciences without prior approval of adviser.
(3) Majors in the public relations sequence should make every effort to schedule MK320, MK433, and AD321.

PHILOSOPHY AND RELIGIOUS STUDIES DEPARTMENT

SHARON B. MONTGOMERY, CHAIRPERSON; BOONE, BOUFFARD, CHAN, FERRARA, LIN, MLECKO, PURVIANCE, SCHAUB, YIRENKYI

PHILOSOPHY

The program in philosophy is designed to provide the student with a capacity for thinking clearly, a critical attitude, and the ability to reason theoretically.

The major offers the background required for graduate work in philosophy. Those whose primary interests are in other disciplines will find philosophy courses which relate directly to their fields on a theoretical level. Both the minor and double major are especially desirable for their reflective benefits and because of the essentially interdisciplinary nature of philosophy.

Individually Designed Philosophy Minor

As a minor, philosophy has much to offer in helping individuals of various backgrounds better understand the fundamental assumptions of their disciplines. For that reason, the minor in Philosophy will be individually designed to meet special career needs and personal interests. Selection of courses will be accomplished through discussions with and approval of the department adviser. The minimum requirement for a minor is 15 semester hours with the restrictions on the major applying to the minor also. Students must expect careful planning in any program approved. For further explanation and suggestions, see departmental adviser.

General Education Offerings

The Philosophy program's general education courses are all introductory in nature; none of them presupposes any philosophical background. The student may choose from the following: PH 101, General Logic, PH120, Introduction to Philosophy; PH221, Symbolic Logic (approved substitute: PH330, Philosophy of Science); PH222, Ethics; PH223, Philosophy of Art.

Pre-law Program

The Philosophy Department participates in the University Pre-Law Minor Program whereby a student majors in one of several academic disciplines including philosophy and also meets the pre-law minor requirements. Students interested in the philosophy major/pre-law minor should consult the departmental pre-law adviser. Philosophy courses included in the pre-law minor program are as follows: PH101, General Logic; PH222, Ethics, and PH450, Philosophy of Law.

BACHELOR OF ARTS in PHILOSOPHY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Humanities: Foreign Language III and IV

MAJOR: 30

Required courses:

PH324	History of Philosophy I: Ancient and Medieval	3 sh
PH325	History of Philosophy II: Renaissance and Modern	3 sh
PH405	Human Rights: Their Basis and Boundaries	3 sh
PH420	Metaphysics	3 sh
PH421	Theory of Knowledge	3 sh

Controlled electives:

One course from: PH101 or PH221	3 sh
Four other PH courses (with restrictions)	12 sh(1)

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 42

TOTAL DEGREE REQUIREMENTS: 124

(1) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.

BACHELOR OF ARTS in PHILOSOPHY/Pre-law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52

Humanities: Foreign Language III and IV

MAJOR: 30

Required courses:

PH324	History of Philosophy I: Ancient and Medieval	3 sh
PH325	History of Philosophy II: Renaissance and Modern	3 sh
PH405	Human Rights: Their Basis and Boundaries	3 sh
PH420	Metaphysics	3 sh
PH421	Theory of Knowledge	3 sh

Controlled electives:

One course from: PH101 or PH221	3 sh
Four other PH courses (with restrictions)	12 sh(1)

OTHER REQUIREMENTS: Pre-law Interdisciplinary Sequence 21

At least one course from the six areas

Business: AD235, AG201, AG202
Criminology: CR101, CR201, CR260
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Political Science: PS358, PS359, PS361

FREE ELECTIVES: 21

TOTAL DEGREE REQUIREMENTS: 124

(1) No more than three 100-200 level courses may be counted toward the major. Only PH courses may be counted toward the major. Unless otherwise indicated in the Course Descriptions, all 300-400 level courses require junior or senior standing or permission of the instructor. This prerequisite applies both to Philosophy majors and to majors in any other discipline.

RELIGIOUS STUDIES

The Program in Religious Studies is designed to provide a balanced, nonsectarian, cross-cultural approach leading to a better understanding of the phenomenon of religion in human experience. It emphasizes an inter-disciplinary approach by a) requiring religion-related courses outside Religious Studies and by b) encouraging the minor or a double major, rather than a single major in Religious Studies.

The program is valuable for those planning careers in religious education, religious journalism, or religious broadcasting. The program also provides an excellent background for graduates planning to enter Catholic, Jewish, or Protestant seminaries. Additionally, Religious Studies is a good complement to majors in such fields as Anthropology, English, Fine Arts, History, International Studies, Music, Philosophy, Political Science, Psychology, and Sociology. Religious Studies is one significant way to integrate course studies within the university curriculum.

In addition to the twenty-four Semester hours of Religious Studies courses in the major, six semester hours must be taken from a number of courses offered by other departments which complement those offered in Religious Studies. Opportunity for interdisciplinary and cross-cultural study is implicit in the study of religious themes—and is required in the Religious Studies Program at IUP.

The requirements for a Minor in Religious Studies are 15 sh:
a) 12 sh must be taken from the Religious Studies offerings, which include certain required courses (see below); b) 3 sh must be taken outside the Religious Studies offering but in "religion-related" courses.

MINOR

RS100 or 110	3 sh
RS370 or 375	3 sh
RS380 or 410 or 440	3 sh
Religion-related courses	3 sh
Electives in Religious Studies	3 sh
	15 sh

General Education Offerings

The Religious Studies program's general education courses are all introductory in nature; none presupposes any Religious Studies background. The student may choose from the following: RS100, Introduction to Religion; RS110, World Religions (approved substitute: RS210, World Scriptures).

BACHELOR OF ARTS in RELIGIOUS STUDIES

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: Foreign Language III and IV

MAJOR:		30
Controlled electives:		
One course from list A: RS100 or RS110	3 sh	
One course from list B: RS210 or RS250	3 sh	
One course from list C: RS370 or RS375	3 sh	
One course from list D: RS380, RS410 or RS440	3 sh	
Four additional RS courses	12 sh	
Two courses from related list:	6 sh	
AH116, AH124, AH316, EN349, HI303, HI304, HI305, HI380, PH120, PH222, PH311, PH324, PH325, PH329, PH420, SO352		
OTHER REQUIREMENTS:		0
FREE ELECTIVES:		42
TOTAL DEGREE REQUIREMENTS:		124

POLITICAL SCIENCE DEPARTMENT

RICHARD F. HEIGES, CHAIRPERSON; BROWN, BYRNES, CARONE, CHASZAR, KEENE, KRITES, MORRIS, PALMER, PLATT

Political scientists focus upon political systems, including the effect of environment on the system, inputs, the decision-making agencies which render binding public policies, and system outputs. Approaches to the study of government and politics include the normative approach, in which philosophical attention centers on values by asking the question, "What ought to be?"; and the behavioral approach, in which an attempt is made to develop verifiable theories through scientific methods by asking the questions "How" and "Why?"

Students majoring in political science have employment opportunities in federal, state, and local governments and with private civic groups, interest groups, and political groups. Students who go on to graduate work find appointments at higher levels and in college teaching. Students graduating in political science, as in any of the social sciences, are in demand by employers in business and industry. Students completing the Political Science Internship Program have experienced considerable success in finding employment upon graduation.

The political science major is also especially suitable for the pre-law student.

Degrees offered by the Political Science Department are the Bachelor of Arts in Political Science, in Government and Public Service, and in Pre- Law-Political Science; and the Bachelor of Science in Education with a Social Science Major, concentrating in Political Science. The department also offers a minor in political science.

An interdisciplinary major sponsored by the Political Science Department is International Studies. For information on this major, see section on International Studies.

BACHELOR OF ARTS in POLITICAL SCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications:		52
Humanities: Foreign Language III and IV		

MAJOR: 30
Controlled electives:
At least one course in three of first four areas:
American Studies: PS251, 298, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PS360, 361, 362
Public Policy and Administration: PS250, 370, 371, 444
International Studies: PS280, 281, 283, 285, 320, 321
380, 382, 383, 384, 385, 386, 387, 388, 389 (1)
General Political Science: PS299 (strongly recommended)
PS377, 480, 481, 482, 485, 493

OTHER REQUIREMENTS: 15-27
Second major, minor, or concentration as approved by adviser with maximum of 15 credits outside College of Humanities and Social Sciences unless specifically approved.

FREE ELECTIVES: 27-15

TOTAL DEGREE REQUIREMENTS: 124

(1) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389

BACHELOR OF ARTS in POLITICAL SCIENCE/Pre-Law

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: Foreign Language III and IV

MAJOR: 30
Controlled electives:
At least one course in three of first four areas:
American Studies: PS251, 298, 346, 350, 351, 353, 354, 355, 356, 357, 358, 359
Political Theory: PS360, 361, 362
Public Policy and Administration: PS250, 370, 371, 444
International Studies: PS280, 281, 283, 285, 320, 321
380, 382, 383, 384, 385, 386, 387, 388, 389 (1)
General Political Science: PS299 (strongly recommended)
PS377, 480, 481, 482, 485, 493

OTHER REQUIREMENTS: Pre-law interdisciplinary minor 21
At least one course from six areas:
Business: AD235, AG201, AG202
Criminology: CR101, CR210, CR260
Economics: EC121, EC122, EC332
English: EN213, EN220, EN310
History: HI320, HI321, HI346
Philosophy: PH101, PH222, PH327

FREE ELECTIVES: 21

TOTAL DEGREE REQUIREMENTS: 124

(1) PS280 and/or PS285 recommended as prerequisite to PS380 through PS389

BACHELOR OF ARTS in GOVERNMENT AND PUBLIC SERVICE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Humanities: Foreign Language III and IV
- Social Science: EC121, PC101, PS111, SO151
- Science/Math elective: CO200
- Math requirement: MA 217

MAJOR: 36

Required courses:

PS250	Public Policy	3 sh
PS251	State and Local Political Systems	3 sh
PS299	Research and Methods in Political Science	3 sh
PS370	Introduction to Public Administration	3 sh
PS371	Issues in Public Administration	3 sh
PC330	Social Psychology	3 sh
EC335	Public Finance	3 sh(1)
EC336	State and Local Finance	3 sh(1)
S0458	Political Sociology	3 sh(2)

Controlled electives: 9 sh
- Three courses from list: PS350, 351, 352, 353, 354, 355 358, 377, 444, 481, 482, 485, 493

OTHER REQUIREMENTS: 21
- One course from communications areas 3 sh
  (English, Journalism, Communications Media) as approved by adviser
- Interdisciplinary minor 18 sh
  - Government Management
  - Personnel Administration
  - Financial Administration
  - Planning

FREE ELECTIVES: 15

TOTAL DEGREE REQUIREMENTS: 124

(1) Approved substitutes for EC335, and EC336: EC283, 332, 333, 373
(2) Approved substitutes for SO458: SO335, 345, 303

BACHELOR OF ARTS in INTERNATIONAL STUDIES

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Humanities: Foreign Language III and IV
- Social Science: PS101, PS111

MAJOR: 30
- Controlled electives: International Perspective sequence 15 sh
  - One introductory or comparative international course from five social science disciplines
    - Economics: EC122, 340, 345, 350
    - Geography: GE231, 331
    - History: HI308, HI361, HI362
    - Political Science: PS280, 281, 283, 320, 321, 370
    - Sociology/Anthropology: AN211, S0334

Specialization sequence		15 sh
Social Studies		
The Far East		
Latin America		

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 42

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCE EDUCATION/Political Science Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Social Science: H1104, PC101, PS101, PS111

MAJOR: 42

Controlled electives: Political Science concentration		
Five courses in Political Science (including PS101 and PS111 in general education)		9 sh
Controlled electives: Social Science major		
Two courses in Economics		6 sh(1)
Two courses in Geography		6 sh(1)
Two courses in History		6 sh(1)
Two courses in Sociology/Anthropology		6 sh(1)
One additional course in social science		3 sh(1)
Additional PS courses as approved by advisor		6 sh

OTHER REQUIREMENTS: Professional Education sequence 30

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED455	Teaching of Social Sciences in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: (1) 0

(1) Courses included among the General Education social science electives may reduce the number of courses required in this area and permit free electives.

TOTAL DEGREE REQUIREMENTS: 124

SOCIOLOGY-ANTHROPOLOGY DEPARTMENT

KAY SNYDER, CHAIRPERSON; ACKERMAN, GONDOLF, GRANT, HOLTZ, HUNTER, KRUCKMAN, LANHAM, LOUDEN, NEUSIUS, NOWAK, OLIN-FAHLE, RAWLEIGH, REYNOLDS, SANDERSON, VEXLER

The Sociology-Anthropology Department provides opportunity for studies in sociology and anthropology. Students can pursue academic and applied careers in sociology and anthropology (e.g., Clinical Sociology, Applied Social Research, Cultural Resource Management, Archaeology). Each discipline concentrates upon human social life, but emphasizes different aspects of that life. The discipline of sociology focuses primarily upon the analysis of modern industrial societies by examining their basic patterns of social organization, the changes produced within these patterns, and the impact of these patterns on the thought and action of human beings. Anthropology emphasizes the study of human biological and cultural evolution within its four subfields: sociocultural anthropology, physical anthropology, linguistics, and archaeology. Majors can combine basic and applied coursework that weds the "sociological imagination" with the pursuit of practical careers. Students are provided with a breadth of knowledge and a variety of perspectives that allow them to remain uniquely broad thinkers in an age where there is a shortage of those who can integrate knowledge.

The degree programs offered by the department are relevant to a variety of careers and lifetime undertakings. Majors have employment opportunities in professional service, government, or national or international research organizations. Those who go on to do graduate work find appointments at higher levels and in college teaching. Students graduating in sociology and anthropology, as in any of the social sciences, are in demand by employers in business and industry. Majors who choose an applied sociological or anthropological track are successful in finding employment in research or counseling within a diverse set of organizations in various capacities (e.g., social service worker, juvenile counselor, medical sociologist, gerontologist, etc.). Students in archaeology also may apply their knowledge of historic preservation in private sector employment. Those students obtaining applied anthropology skills have many employment opportunities in cross-cultural settings.

BACHELOR OF ARTS in ANTHROPOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			52
Humanities: Foreign Language III and IV			
Social Science: AN110			
MAJOR:			24
Required courses:			
AN110	Introduction to Anthropology	* sh	
AN222	Introduction to Physical Anthropology	3 sh	
AN233	Cultural Symbolism: Language in Culture and Society	3 sh	
AN244	Basic Archaeology	3 sh	
Controlled electives:			
One course in Archaeology: AN213, 315, 317, 320		3 sh	
One course in Areal Ethnography: AN312, 314, 371		3 sh	
One course in Topical Anthropology: AN211, 316, 318, 319, 321, 322, 401		3 sh	
Two additional AN electives		6 sh	

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 48

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in SOCIOLOGY/General Sociology Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Humanities: Foreign Language III & IV
- Mathematics: MA217 recommended
- Social Science: SO151

MAJOR: 27

Required courses:

SO151	Principles of Sociology	* sh
SO231	Contemporary Social Problems	3 sh
SO447	Modern Sociological Theory	3 sh
SO455	Social Research Methods	3 sh

Controlled electives: 18 sh(1)
- Social Institutions: SO336, 340, 341, 348, 352, 421, 458, 459
- Social Structures and Processes: AN319, SO302, 303, 334, 338, 339, 345, 405, 435, SW346
- Social Problems: SO231, 251, 332, 333, 335, 354, 357, 427, 428, SW238
- Cross-cultural Studies: AN211, 312, 316, 444, SO233, 237, 314, 322, 337, 342, 371
- Theory and Research: AN317, 321, SO301, 443, 449, 456, 457

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 45

TOTAL DEGREE REQUIREMENTS: 124

(1) It is suggested that students who wish a broad education in sociology take at least one course in each of the substantive areas.

BACHELOR OF ARTS in SOCIOLOGY/Clinical Sociology Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
- Humanities: Foreign Language III and IV
- Mathematics: MA217 recommended
- Social Sciences: SO151 required, AN110 and PC101 recommended

MAJOR: 42

Required courses:

SO151	Principles of Sociology	* sh
SO301	Clinical Sociological Theory	3 sh
SO302	Clinical Sociological Practice	3 sh
SO303	Social and Cultural Change	3 sh
SO447	Modern Sociological Theory	3 sh
SO455	Social Research Methods	3 sh
SO471	Internship in Sociology	12 sh

Controlled electives: One substantive area (2) 15 sh(1)
Medical Sociology: AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, 360, FN212, GE360, PC321, 378, S0231, 336, 342, 357, 459
Gerontology: PC378 or SO357, and 4 courses from list: AN444, EC335, 360, GE360, PC312, 378, SO231, 251, 336, 342, 352, 357, 378
Juvenile Delinquency: CR451 or S0333, and 4 courses from list: CR102, 270, 361, 370, 451, GE432, HI374, SO231, 332, 333, 336, 339, 345, 435
Interpersonal and Family Sociology: SO322 or 336 or 345, and 4 courses from list: AN319, HE218, 224, PC311, 357, 358, SO251, 322, 334, 335, 336, 337, 339, 345, 354, 427, 428, 435
Labor and Industry: SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, PS352, SO231, 303, 334, 340, 348, 435, 443, 458
Community Development: SO339 or 405, and 4 courses from list: AN314, 319, 371, EC336, 382, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 334, 336, 338, 339, 341, 354, 405

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 30

TOTAL DEGREE REQUIREMENTS: 124

(1) At least two courses in any substantive area must be SO (Sociology) courses.
(2) Students may create their own substantive area with the approval of the department chairperson.

BACHELOR OF ARTS in SOCIOLOGY/Applied Social Research Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: Foreign Language III & IV
Mathematics: MA217
Social Sciences: SO151 required, AN110 recommended
Science/Math: CO200

MAJOR: 42
Required courses:

SO151	Principles of Sociology	* sh
SO447	Modern Sociological Theory	3 sh
SO455	Social Research Methods	3 sh
SO456	Field Research Methods	3 sh
SO457	Computer Use in Sociology	3 sh
SO458	Political Sociology	3 sh
SO471	Internship in Sociology	12 sh

Controlled electives: One substantive area (2) 15 sh(1)
Medical Sociology: AN444 or SO342, and 4 courses from list: AN222, 444, BI151 or 155, EC335, 360, FN212, GE360, PC321, 378, SO231, 335, 336, 342, 357, 459
Gerontology: PC378 or SO357, and 4 courses from list: AN444, EC335, 360, GE360, PC312, 378, SO231, 251, 336, 342, 352, 357, 378
Juvenile Delinquency: CR451 or SO333, and 4 courses from list: CR102, 270, 361, 370, 451, GE432, HI374, SO231, 332, 333, 336, 339, 345, 435

Interpersonal and Family Sociology: SO322 or 335 or 346, and 4 courses from list: AN319, HE218, 224, PC311, 357, 358, SO251, 322, 334, 335, 336, 337, 339, 345, 354, 427, 428, 435
Labor and Industry: SO340 or 348, and 4 courses from list: EC330, 350, 371, 372, 373, HI373, LR426, 480, PC420, PS352, SO231, 303, 334, 340, 348, 435, 443, 458
Community Development: S0339 or 405, and 4 courses from list: AN314, 319, 371, EC336, 382, FN402, GE331, 332, 360, PS251, 354, SO231, 333, 334, 336, 338, 339, 341, 354, 405

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 30

TOTAL DEGREE REQUIREMENTS: 124

(1) At least two courses in any substantive area must be SO (Sociology) courses.
(2) Students may create their own substantive area with the approval of the department chairperson.

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCES EDUCATION/Anthropology Concentration

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 52
Humanities: HI 101 recommended
Social Science: AN 110, SO 151, PC 101

MAJOR: 42

Controlled Electives: Anthropology Concentration		
Five courses in Anthropology		15 sh
Controlled electives: Social Science majors		
Two courses in Economics		6 sh(1)
Two courses in Geography		6 sh(1)
Two courses in Political Science		6 sh(1)
Two courses in History		6 sh(1)
One additional course in Sociology		3 sh(1)

OTHER REQUIREMENTS: 30

Professional Education Sequence		
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED455	Teaching of Social Sciences in Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of American Education	3 sh

FREE ELECTIVES: (1) 0
(1) Courses included among the General Education Social Science electives may reduce the number of courses required in this area and permit free electives.

TOTAL DEGREE REQUIREMENTS: 124

MINOR in SOCIOLOGY — 15

Required course:		
SO151	Principles of Sociology	3 sh
Controlled electives:		
One course from list: SO231, SO449, SO455		3 sh
Three additional courses in sociology		9 sh

BACHELOR OF SCIENCE IN EDUCATION in SOCIAL SCIENCES EDUCATION/Sociology Concentration

GENERAL EDUCATION: As outlined in General Education section with the following specifications: — 52

Humanities: HI 101 recommended
Social Science: AN 110, SO 151, PC 101

MAJOR: — 42

Controlled Electives: Sociology Concentration	
Five courses in Sociology	15 sh
Controlled electives: Social Science majors	
Two courses in Economics	6 sh(1)
Two courses in Geography	6 sh(1)
Two courses in Political Science	6 sh(1)
Two courses in History	6 sh(1)
One additional course in anthropology	3 sh(1)

OTHER REQUIREMENTS: — 30

Professional Education Sequence		
CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED455	Teaching of Social Sciences in Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurement	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: (1) — 0

(1) Courses included among the General Education Social Science electives may reduce the number of courses required in this area and permit free electives.

TOTAL DEGREE REQUIREMENTS: 124

MINOR in ANTHROPOLOGY — 15

Required course:		
AN110	Introduction to Anthropology	3 sh
Controlled electives:		
Four additional courses in Anthropology		12 sh

MINOR in APPLIED SOCIAL RESEARCH 15

Required courses:		
SO455	Social Research Methods	3 sh
SO456	Field Research Methods	3 sh
SO457	Computer Use in Sociology	3 sh
SO458	Political Sociology	3 sh
Controlled elective:		
Any research course in College of Humanities and Social Sciences, as approved by department chairperson		3 sh
Optional Internship:		
AN493 or SO493		6 sh

DEPARTMENT OF SPANI SH AND CLASSICAL LANGUAGES

JOSE M. CARRANZA, CHAIRPERSON; BROAD, DRESCHER, GLISAN, HERNANDEZ, MENDIZABAL, MILTZ, SHIELDS, R. SMITH, SPIEKER, ZALAZAR

The Department of Spanish and Classical Languages offers a varied curriculum designed to provide not only basic language instruction in Spanish, Greek, and Latin but also the more advanced competencies needed by language specialists and students hoping to take advantage of an international study experience. For the undergraduate Spanish major, the department has three degree programs: B.S. in Secondary Education, B.A in Liberal Arts, and the B.A. in Spanish for International Trade. The latter degree program provides solid undergraduate degree training preparatory to an M.B.A. in International Marketing and Finance. At the graduate level, the department offers the Master of Arts in Spanish.

Students majoring in Spanish will acquire proficiency in all phases of the language and enter more deeply into the history, culture, and literature of Spanish-speaking countries. They will also gain some knowledge of the linguistic development of the language throughout the centuries. Spanish majors generally find employment in government work, librarianship, journalism, foreign trade, airlines, tourism, business, and teaching. Students choosing careers as secondary school teachers will find the close supervision and advanced methodology offered by the department a distinct asset.

College Language Requirements

Students in the College of Natural Sciences and Mathematics and College of Humanities and Social Sciences, who must pass a second year language course (FL 251-252 or FL 201) as a college requirement for graduation, may choose any one of the five languages offered: French, German, Greek, Latin, and Spanish. Self-instruction in Critical Languages fulfills the requirement only in the College of Humanities and Social Sciences. The student with no previous foreign language study will take FL 151-152 or FL 101 as a prerequisite; the credits will not be applicable to any college or department requirements but may be counted as general electives in the total required for graduation. Students in the other colleges may choose to take one of the languages offered (any appropriate level) to fulfill the Humanities requirement.

Students with previous Spanish study in high school will be placed into the appropriate course levels by means of a written departmental exam, administered prior to the beginning of the semester. In addition, as deemed necessary in individual cases, students may be required to take

an oral proficiency test with one or more faculty members in the Spanish Department. Each student's individual requirements and the judgment of the classroom instructors will also be considered in placement. No student judged to be a native speaker of Spanish will be allowed to enroll in any course below the 300-level, with the exception of SP254 Commercial Spanish.

Minor in Spanish

A minor in Spanish consists of 21 semester hours, as follows:

SP251-252 or SP201	6 sh
SP21-222	4 sh
SP351-352	6 sh
SP321-322	2 sh
SP361, SP362, SP363, or SP364	3 sh

Second Foreign Language Certification

A foreign language education major may be certified in Spanish as the second language after completing 24 semester hours in Spanish as follows:

SP251-252 or SP201	6 sh
SP221-222	4 sh
SP351-352	6 sh
SP321-322	2 sh
SP361-362 or SP363-364	6 sh

Spanish for Elementary Education

A student in Elementary Education may elect a concentration of 18 semester hours of Spanish, consisting of the following:

SP251-252 or SP201	6 sh
SP221-222	4 sh
SP351-352	6 sh
SP321-322	2 sh

Study Abroad and Internships

STUDY ABROAD: The university has established study abroad centers in both Spain and Mexico. The program in Valladolid, Spain, is a second semester-only program, whereas the one in Jalapa, Mexico, is a summer program. All majors are encouraged to participate in study abroad; non-majors are also accepted into these programs. Students interested in more information should contact the Spanish Department or the Office of the director of Foreign Language Study and Internship Abroad.

INTERNSHIPS: Internships in Spain, Mexico, and Miami are available through the department. All internships take place during the summer and vary from six weeks to two months in duration. Internship is a credit-bearing course, SP493, and all interns are enrolled in presession of summer school. Noncredit internships cannot be considered. Students enrolled in the Spanish for International Trade program are strongly urged to do an internship in order to gain credibility in the field of international business. Internships are available in banking, government, social work, communications, education, marketing, and many other fields. Arranging an internship abroad takes considerable long-range planning, and anyone interested should contact the director of Foreign Language Study and Internship Abroad at least six months in advance.

BACHELOR OF ARTS in SPANISH

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **46**
Social Science: HI 102

MAJOR: **36**
Required courses:

SP221	Conversation III	2 sh
SP222	Conversation IV	2 sh
SP321	Advanced Conversation I	1 sh
SP322	Advanced Conversation II	1 sh
SP201	Intensive Intermediate Spanish	6 sh
	or	
SP251-252	Accelerated Spanish III and IV	6 sh
SP351	Advanced Spanish Language I	3 sh
SP352	Advanced Spanish Language II	3 sh
SP361-362	Development of Spanish Culture and Lit I, II	6 sh
	or	
SP363-364	Development of Spanish-American Culture & Lit I, II	6 sh

Controlled electives:

Other Spanish electives	12 sh(1)

OTHER REQUIREMENTS: **0**

FREE ELECTIVES: **42**

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF ARTS in SPANISH FOR INTERNATIONAL TRADE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **47**
Mathematics: MA121
Social Science: EC121(required); H1102, GE252, PS101 (recommended)
Science/Math elective: MA214

MAJOR: **36**
Required courses:

SP221	Conversation III	2 sh
SP222	Conversation IV	2 sh
SP321	Advanced Conversation I	1 sh
SP322	Advanced Conversation II	1 sh
SP201	Intensive Intermediate Spanish	6 sh
	or	
SP251-252	Accelerated Spanish III and IV	6 sh
SP254	Commercial Spanish	3 sh
SP351	Advanced Spanish Language I	3 sh
SP352	Advanced Spanish Language II	3 sh
SP361-362	Development of Spanish Culture and Lit I, II	6 sh
	or	
SP363-364	Development of Spanish-American Culture & Lit I, II	6 sh

Controlled electives:

Other Spanish electives	9 sh(1)

OTHER REQUIREMENTS: Business sequence			36
AD235	Introduction to Business Law	3 sh	
AD321	Business and Interpersonal Communications	3 sh	
AG201	Accounting Principles I	3 sh	
AG202	Accounting Principles II	3 sh	
EC122	Principles of Economics II	3 sh	
QB215	Business Statistics	3 sh	
IM241	Introduction to Management Information Systems	3 sh	
FI310	Finance I	3 sh	
MG311	Human Behavior in Organizations	3 sh	
MG360	Management and Production Concepts	3 sh	
MG495	Business Policy	3 sh	
MK320	Principles of Marketing	3 sh	
FREE ELECTIVES:			5
		TOTAL DEGREE REQUIREMENTS:	124

BACHELOR OF SCIENCE IN EDUCATION in SECONDARY SPANISH EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 46
Social Science: HI104, PC101
Junior Standing, Speech/Hearing Test

MAJOR:			33
Required courses:			
SP221	Conversation III	2 sh	
SP222	Conversation IV	2 sh	
SP321	Advanced Conversation I	1 sh	
SP322	Advanced Conversation II	1 sh	
SP201	Intensive Intermediate Spanish	6 sh	
	or		
SP251-252	Accelerated Spanish III and IV	6 sh	
SP351	Advanced Spanish Language I	3 sh	
SP352	Advanced Spanish Language II	3 sh	
SP361-362	Development of Spanish Culture and Lit I, II	6 sh	
	or		
SP363-364	Development of Spanish-American Culture & Lit I, II	6 sh	
Controlled electives:			
Other Spanish electives		9 sh(1)	
OTHER REQUIREMENTS: Professional Education sequence			30
CM301	Instructional Media	3 sh	
ED242	Pre-student Teaching I	1 sh	
ED342	Pre-student Teaching II	1 sh	
ED441	Student Teaching	12 sh	
ED442	School Law	1 sh	
ED453	Teaching of Foreign Languages in the Secondary School	3 sh	
EP302	Educational Psychology	3 sh	
EP377	Educational Tests and Measurement	3 sh	
FE302	History and Philosophy of Education	3 sh	

FREE ELECTIVES: (recommended)			**15**
ED481	History and Philosophy of Multicultural Education	3 sh	
EX300	Education of the Exceptional Child in the Regular Classroom	3 sh	

TOTAL DEGREE REQUIREMENTS: 124

(1) Most students earn additional language credits (up to 21) in semester abroad in Valladolid, Spain.

The College of Natural Sciences and Mathematics

CHARLES R. FUGET, DEAN

One of the characteristics of the twentieth century is the marked change in the relation of citizens to their environment. Space probes, orbiting satellites, and productive research on the structure and synthesis of living matter have brought to the forefront for re-examination such time honored queries as, "What is the nature of the universe?", or, "Can man control his natural environment?", or, "How did life begin?". Correct answers to these and other questions, coupled with proper application of this knowledge for humankind's betterment, must be a significant part of the goal of educated people everywhere.

The objectives of the College of Natural Sciences and Mathematics are to acquaint the student with the kinds of problems which lend themselves to possible solutions through the use of science; to introduce different scientific techniques through significant illustrative experiences; to give a sense of perspective in the development of science; and to develop an understanding of the basic community of all scientific disciplines.

DEGREES

The departments of Biology, Chemistry, Computer Science, and Physics offer work leading to either a Bachelor of Science or a Bachelor of Arts degree, depending upon the specific course program pursued. The Bachelor of Science degree is awarded for successful work in the departments of Geoscience and Mathematics. The Bachelor of Arts degree is awarded by the Department of Psychology.

Several departments in the College of Natural Sciences and Mathematics sponsor Master of Arts or Master of Science degrees in the university's Graduate School. The department of Psychology offers the Doctor of Clinical Psychology degree. Information on these programs should be obtained from the the Graduate School.

Degree Requirements

In addition to the university's General Education requirements, all students seeking a baccalaureate degree in the College of Natural Sciences and Mathematics must complete the requirements for a major as established by the department through which they wish to specialize. Statements of these requirements and for minoring in a specific field appear in the department sections that follow. A double major or minor may encompass a discipline outside as well as within the college but should be opted only with adviser approval. As a general principle, there is considerable latitude in course choice for Natural Sciences and Mathematics majors; for specifically required courses, substitutions in any program must have the written approval of the student's department chairperson or the college dean. The intermediate series foreign language requirement (a description follows) applies without exception to all Natural Sciences and Mathematics degrees.

The Foreign Language Requirement

A candidate for a Bachelor of Arts or Bachelor of Science degree must demonstrate a proficiency in a foreign language equivalent to that attained upon completion of two years of college instruction in that language. This requirement may be met by

a. successful completion of two semesters at the second-year level in a specific foreign language; or
b. successful completion of an exemption or credit examination in lieu of the above, the examination administered by the IUP foreign languages department.

The foreign language requirement currently may be met through work in French, German, Greek, Latin, or Spanish.

Any foreign student, registered as such at IUP, whose acquired native language is other than English and who demonstrates an acceptable proficiency in English, is exempt from the foreign language requirement for a Natural Sciences and Mathematics degree, if the department he/she is majoring in does not require a specific language not thus covered.

PREPROFESSIONAL PROGRAMS

The College of Natural Sciences and Mathematics offers Preprofessional programs for the preparation of students for acceptance by a professional school: pre-dental, pre-medical, and pre-veterinary medicine. In addition, the college offers a major in the Natural Sciences for those students whose goal is pharmacy or pharmacology, optometry, osteopathy, podiatry, or similar professional field. All programs are so designed that, should work at a professional school not ensue, the student may earn an IUP baccalaureate degree, provided he/she has been faithful to faculty advisement.

The preprofessional health programs in Natural Sciences and Mathematics presuppose that the student has an excellent background in the high school sciences and mathematics or will prove to be an excellent college student. Because admission standards at most professional schools are very high, students desiring preprofessional preparation for any of these fields will find it advantageous to major in the basic department discipline, making known to the department chairperson their eventual goal but delaying explicit affiliation with the preprofessional program until they have established themselves academically at the college level. Commitment to any preprofessional program must be made no later than the end of the student's fourth semester.

Students interested in the related health fields (dentistry, pharmacy, optometry, osteopathy, physical therapy, podiatry, etc.) should consult with the dean of the College of Natural Sciences and Mathematics during their first semester of IUP attendance or as soon thereafter as possible.

COOPERATIVE PROGRAMS

IUP has been fortunate to enter into cooperative agreements with a number of outstanding institutions to provide significant career opportunities to our students. These formal agreements provide for accelerated graduate or professional degree programs or carefully planned and coordinated undergraduate programming with the cooperating institution. Programs are intended to assure acceptance of properly qualified students by the cooperating professional schools. Additional information concerning the specific programs can be found under the appropriate academic department in this catalog.

ENGINEERING (See Department of Physics)

Drexel University - the program combines the opportunity for two years of study at IUP with the remaining three years of study as part of the Drexel plan of cooperative education.

University of Pittsburgh - the program will allow the student to enroll at IUP for the first two years of college and conclude degree work by enrolling in an engineering program at the University of Pittsburgh for the last two years.

FAMILY MEDICINE (See Department of Biology)

Jefferson Medical College of Thomas Jefferson University - the program is designed to increase the opportunities for IUP students to be admitted to Jefferson Medical College in the Family Medicine Program designed to provide physicians to rural communities in Pennsylvania where there is a shortage.

FORESTRY AND ENVIRONMENTAL STUDIES (See Department of Biology)

Duke University - the program is designed to coordinate the education of students from IUP with the graduate programs in forestry and environmental management offered at Duke University.

PODIATRY (See Natural Science)

Pennsylvania College of Podiatric Medicine - the program is designed to accelerate the professional training of IUP students in the field of podiatry.

OPTOMETRY (See Natural Sciences)

Pennsylvania College of Optometry - the program is designed to accelerate the professional training of IUP students in the field of optometry.

MARINE SCIENCE CONSORTIUM

College majors may be interested in the programs available through the Marine Science Consortium. The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the marine sciences. The participating institutions include Indiana University of Pennsylvania and thirteen other colleges and universities. Although no separate major in the Marine Sciences exists, elective courses may be taken and credited toward undergraduate curriculums in Biology, Geology, Geography, and Earth Science. The Marine Science Consortium offers five three-week sessions during the summer at the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

Students must register for credit and pay credit fees to a participating institution. Room and board fees are paid to the consortium. Applications for all summer sessions must be submitted to the institutional director by April 1. Students must be accepted by the consortium before registering at a participating institution. See section on Marine Science Consortium for a listing of courses. For brochure, summer bulletin and application forms, contact Dr. Ray L. Winstead, Biology, and Dr. Darlene S. Richardson, Geoscience, who are the IUP directors and assist students in program planning.

INTERNSHIP PROGRAMS

Several departments have established programs under which students engage in an off-campus supervised work experience for credit.

For more information about specific Internship programs, students should consult with the chairperson of the department in which the student is majoring. Low-income students eligible for internships may receive federal-state funding.

OPTOMETRY (See Natural Sciences)

Pennsylvania College of Optometry - the program is designed to accelerate the professional training of IUP students in the field of optometry.

MARINE SCIENCE CONSORTIUM

College majors may be interested in the programs available through the Marine Science Consortium. The Marine Science Consortium was established in 1968 for the purpose of promoting teaching and research in the marine sciences. The participating institutions include Indiana University of Pennsylvania and thirteen other colleges and universities. Although no separate major in the Marine Sciences exists, elective courses may be taken and credited toward undergraduate curriculums in Biology, Geology, Geography, and Earth Science. The Marine Science Consortium offers five three-week sessions during the summer at the NASA-Wallops Island Station, Virginia. Normally, several research cruises are offered each summer.

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INTERNSHIP PROGRAMS

Several departments have established programs under which students engage in an off-campus supervised work experience for credit.

For more information about specific Internship programs, students should consult with the chairperson of the department in which the student is majoring. Low-income students eligible for internships may receive federal-state funding.

BIOLOGY DEPARTMENT

WALTER W. GALLATI, CHAIRPERSON; ALICO, ANDREW, ASH-JOHNSON, BAKER, BROWE, CHARNEGO, CISKOWSKI, DIETRICH, FERRENCE, FORBES, GRAU, HULING, HULSE, HUMPHREYS, KESNER, LINZEY, LUCIANO, NASTASE, NEWELL, PICKERING, PISTOLE, SCHARMANN, SCHROCK, SLINGER, WINSTEAD, ZENISEK

Degrees offered by the Biology Department are the Bachelor of Science in Biology, the Bachelor of Arts in Biology, Bachelor of Science in Environmental Health, and the Bachelor of Science in Education with a Biology major. The first three degree programs are under the College of Natural Sciences and Mathematics, and the fourth is under the College of Education. The department also offers a Biology minor.

The program leading to a B.S. in Biology is designed to provide maximum depth in the sciences and mathematics with minimum elective opportunity. Students who plan to attend graduate school or professional schools such as those in human or veterinary medicine most often choose this program of studies.

The program leading to a B.A. in Biology is designed to reduce the requirement in sciences and mathematics and allow for greater elective choice from diverse fields. Unspecialized career plans can be best accommodated with this program.

The Environmental Health program is a preparation for employment in local, state, and federal agencies and industry. Between the junior and senior year, each student should serve an internship with a governmental agency or an industrial concern.

The program leading to the B.S. in Education with a Biology major is designed to prepare for certification in public school teaching.

NOTE: The Biology Department cooperates in programs with Jefferson Medical College, Duke University School of Forestry and Environmental Studies, and Marine Science Consortium, Inc.

DUKE COOPERATIVE COLLEGE PROGRAM IN FORESTRY AND ENVIRONMENTAL STUDIES

The Cooperative College program with the Duke University School of Forestry and Environmental Studies is designed to coordinate the undergraduate education of students at Indiana University of Pennsylvania with graduate programs in the areas of resources and environment offered at Duke. Undergraduate majors in one of the natural sciences, mathematics, economics, business, or political science are suited to the program. Preparation for the Duke program should include at least one year each of biology with work in botany, economics with a significant component of microeconomics, and mathematics which should include calculus, computer science, and statistics. Applicants to the Duke program who have completed courses in ecology, chemistry, geology, physics, and a foreign language; or additional courses in biology, economics, and mathematics will be given preferential consideration. Students are accepted in either of two degree programs at Duke, the Master of Forestry (MF) or Master of Environmental Management (MEM).

Students may be accepted into the Duke graduate program after three years of high-quality undergraduate study at IUP or upon completion of the baccalaureate. Students who qualify after three years will have completed most of the undergraduate degree requirements at IUP except for total hours. Courses at Duke will be applied to the bachelor's degree at IUP. Dr. Gould F. Schrock, Department of Biology, is the faculty adviser at IUP and assists students in program planning.

JEFFERSON MEDICAL COLLEGE-IUP PHYSICIAN SHORTAGE AREA PROGRAM

A cooperative Family Medicine Physician Education Program has been established by IUP and Jefferson Medical College of Thomas Jefferson University in Philadelphia for the purpose of improving the distribution of physicians in Pennsylvania. The program is designed to increase the opportunities for young women and men to practice family medicine in the rural communities of Pennsylvania where there is a shortage of physicians.

The program at Jefferson Medical College will admit approximately twelve graduates of IUP and twelve graduates of other colleges each year. Students from IUP will be admitted only if properly qualified according to the admission standards and policies of Jefferson Medical College. Applications are reviewed by the Joint IUP-Jefferson Subcommittee and recommendations made to the Jefferson Committee on Admissions.

Requirements for Admission to Jefferson Medical College

Students may choose from a variety of major fields of study during their four years at IUP. Regardless of the major field of study, one year (8 sh) coursework must be included in each of the following four areas: General Biology or Zoology, Physics, Inorganic Chemistry, and Organic Chemistry (32 sh).

In addition to the minimum course requirements, the prospective medical student is advised to complete such courses as physical chemistry, quantitative analysis, comparative vertebrate anatomy, genetics, animal developmental biology, calculus, psychology, sociology, and philosophy. Although these courses are not required for admission to Jefferson Medical College, they are recommended in order that students have an adequate professional, social, and ethical background for the study of medicine. After four years of study at IUP, students will qualify for the Bachelor of Science degree with a major in biology, chemistry, or other curriculums if preferred.

Students who qualify for the Physician Shortage Area Program (PSAP) must certify their intentions to adhere to the following plan of education and practice: (a) complete the family medicine curriculum during their four years of medical education at Jefferson Medical College, including a six-week clerkship in a rural area; (b) complete the family medicine curriculum a three-year family medicine residency; and (c) agree to practice family medicine in an underserved area. Preference will be given to Pennsylvania residents who are interested in this program, with highest priority given to those who actually live, at the time of application, in the underserved area in which they hope to practice. The Associate Dean, College of Natural Sciences and Mathematics, will assist students in program planning.

In the programs of study that follow, no more than six semester hours in aggregate from internships, independent study, and special topics may be counted toward biology course requirements. Credits beyond six earned from these sources are counted as general electives.

BACHELOR OF ARTS in BIOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			53
Humanities: Foreign Language III and IV			
Mathematics: MA121			
Natural Science: CH111-112			
MAJOR:			27
Required courses:			
BI105	Cell Biology	4 sh	
BI110	Plant Biology	5 sh	
BI120	Animal Biology	5 sh	
BI263	Genetics	3 sh	
BI480	Biology Seminar	1 sh	
Controlled electives:			
Biology electives (major courses only)		9 sh(1)	
OTHER REQUIREMENTS:			8
Chemistry sequence			
CH231	Organic Chemistry I	4 sh	
CH351	Biochemistry	4 sh	
FREE ELECTIVES:			36
		TOTAL DEGREE REQUIREMENTS:	124

(1) No more than 6 sh total from Independent Study, Special Topics, Internship, applies to major; excess applied as free electives.

BACHELOR OF SCIENCE in BIOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications:	54
Humanities: Foreign Language III and IV	
Mathematics: MA121	
Natural Science: PY111/121-112/122	
Science/Math elective: MA122 or MA216	

MAJOR: 33

Required courses:

BI105	Cell Biology	4 sh
BI110	Plant Biology	5 sh
BI120	Animal Biology	5 sh
BI263	Genetics	3 sh
BI480	Biology Seminar	1 sh

Controlled electives:

Biology electives (major courses only) 15 sh(1)

OTHER REQUIREMENTS: 20

Chemistry sequence

CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH232	Organic Chemistry II	4 sh
CH351	Biochemistry	4 sh

FREE ELECTIVES: 17

TOTAL DEGREE REQUIREMENTS: 124

(1) No more than 6 sh total from Independent Study, Special Topics, Internship, applies to major; excess applied as free electives.

BACHELOR OF SCIENCE IN EDUCATION in BIOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 49

Mathematics: MA217
Natural Science: PY111/121-112/122
Social Science: HI104, PC101
Science/Math elective: (covered by BI110, 120)

MAJOR: 30

Required courses:

BI103	General Biology I	4 sh
BI104	General Biology II	4 sh
BI110	Plant Biology	5 sh
BI120	Animal Biology	5 sh
BI361	Microbiology	3 sh
BI480	Biology Seminar	1 sh

Controlled electives:

Biology electives: (major courses only) BI105, BI263, and BI362 (recommended) 8 sh

OTHER REQUIREMENTS: 46

Chemistry sequence:

CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH351	Biochemistry	4 sh

Professional Education Sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED451	Teaching Science in the Secondary Schools	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measures	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 0

TOTAL DEGREE REQUIREMENTS: 125

BACHELOR OF SCIENCE in ENVIRONMENTAL HEALTH

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 54

Humanities: Foreign Language III and IV
Mathematics: MA121
Natural Science: PY111/121-112/122
Social Science: PS111
Science/Math elective: MA122 or MA216

MAJOR: 36

Required courses:

BI105	Cell Biology	4 sh
BI110	Plant Biology	5 sh
BI120	Animal Biology	5 sh
BI241	General Microbiology	3 sh
BI362	Ecology	3 sh
BI310	Applied Entomology and Zoonoses	3 sh
BI321	Environmental Protection I	3 sh
BI322	Environmental Protection II	3 sh
BI480	Biology Seminar	1 sh
BI498	Internship or Alternate Experience	6 sh

OTHER REQUIREMENTS: 21

CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
SA101	Intro to Occupational Safety and Health Management	3 sh
SA301	Nature and Effects of Occupational Health Hazards	3 sh
SA302	Measurements and Evaluation of Occupational Health Hazards	3 sh

FREE ELECTIVES: 13

TOTAL DEGREE REQUIREMENTS: 124

MINOR in BIOLOGY

MINOR: 17

Required courses: Option A		
BI103-104	General Biology I and II	8 sh
Three additional BI major courses		9 sh
Required courses: Option B		
BI105	Cell Biology	4 sh
BI110	Plant Biology	5 sh
BI120	Animal Biology	5 sh
One additional BI major course		3 sh(1)

OTHER REQUIREMENTS:
Must have permission of Biology Department Chairperson.

(1) See department for modifications to biology minor for psychology majors.

CHEMISTRY DEPARTMENT

NEIL J. ASTING, CHAIRPERSON; BALLAS, BORDAS, CHRISTODOULEAS, COLEMAN, COSTA, CRUMM, FAZIO, HARTLINE, KOLACZKOWSKI, McKELVEY, PATSIGA, SCROXTON, SYTY, TACKETT, VARUGHESE, WOOD, WOOLCOCK, ZAMBOTTI

Degrees offered by the Chemistry Department are the Bachelor of Science in Chemistry, the Bachelor of Arts in Chemistry, and the Bachelor of Science in Education with a Chemistry major. The first two degree programs are under the College of Natural Sciences and Mathematics, and the third is under the College of Education. The department also offers a Chemistry minor.

The B.S. in Chemistry is a professional degree and is accredited by the American Chemical Society. The student completing this major should be qualified to assume a position in industry or government as a chemist or to apply for admission to graduate school to pursue advanced studies leading to the M.S. or Ph.D. degree. The student considering going to a professional school who also wishes to complete this degree should elect appropriate courses as required by the professional school in addition to the courses required here. Those students who are particularly interested in biochemistry should elect a few selected biology courses.

The curriculum leading to the B.A. in Chemistry is designed to allow for the workable union of nonscience areas with chemistry in such a way as to retain the fundamental science and mathematics requirements needed for a career in chemistry. A cognizant selection of electives will qualify the student for entrance into many fields in which there is an acute need for educated people and, at the same time, satisfy the entrance requirements of various professional and graduate schools.

Some possible and useful combinations between chemistry and other disciplines would include chemistry-biology, chemistry-business administration, chemistry-computer science, chemistry-criminology, chemistry-government, chemistry-pre-dental, chemistry-pre-law, chemistry-pre-medicine, and chemistry-English (technical writing). The student must arrange a practical sequence of non-chemistry courses in consort with his/her adviser and the department chairperson concerned. A student seeking a career in forensic science should major in chemistry. The department also offers pre-medical programs in both the B.S. and B.A. curricula. These programs prepare the student to satisfy the entrance requirements of medical schools.

The curriculum leading to the B.S. in Education with a Chemistry major is designed to prepare the student to teach chemistry at the secondary school level. Upon completion of the specified coursework, the graduate is eligible for certification as a chemistry teacher by the Pennsylvania Department of Education.

BACHELOR OF ARTS in CHEMISTRY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **54**
- Humanities: Foreign languages III and IV
- Mathematics: MA121 or MA123
- Natural Science: PY111/121-112/122 or PY131/141-132/142
- Science/Math elective: MA122 or MA124

MAJOR: **29**

Required courses:

CH113	Concepts in Chemistry I	4 sh
CH114	Concepts in Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH232	Organic Chemistry II	4 sh
CH321	Quantitative Analysis	4 sh
CH322	Instrumental Analysis	4 sh
CH341	Physical Chemistry I	4 sh
CH343	Physical Chemistry Laboratory I	1 sh

OTHER REQUIREMENTS: **15**

Planned program in complementary field	15 sh (1)
(adviser approval) with 6 sh in 300/400 level courses	(2)

FREE ELECTIVES: **26**

TOTAL DEGREE REQUIREMENTS: 124

(1) Recommended fields: Biology, Business, Computer Science, Criminology, Dietetics, Economics, English, Foreign Language, Geoscience, Mathematics, Physics, Political Science, Psychology

(2) Chemistry Pre-Med program requires: BI105, BI120, BI263, BI331, BI352, and CH351

BACHELOR OF SCIENCE in CHEMISTRY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**
- Humanities: GM251-252 (GM256 substitutes for GM252)
- Mathematics: MA123
- Natural Sciences: PY131/141-132/142
- Science/Math electives: CO110

MAJOR: **42**

Required courses:

CH113	Concepts in Chemistry I	4 sh
CH114	Concepts in Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH232	Organic Chemistry II	4 sh
CH301	Chemistry Seminar	1 sh
CH321	Quantitative Analysis	4 sh

CH322	Instrumental Analysis	4 sh
CH341	Physical Chemistry I	4 sh
CH342	Physical Chemistry II	3 sh
CH343	Physical Chemistry Laboratory I	1 sh
CH344	Physical Chemistry Laboratory II	1 sh
CH411	Inorganic Chemistry	3 sh

Controlled electives:
Additional Chemistry electives from list: 6 sh(1)
CH302, CH303, CH331, CH335, CH351, CH376, CH412, CH421, CH441, CH498

OTHER REQUIREMENTS: **7-8**
Additional math: MA124 and one additional course from MA171, MA227, MA241, MA342 — 7-8 sh
Pre-Med program (2)

FREE ELECTIVES: **22-21**

TOTAL DEGREE REQUIREMENTS: 124

(1) CH498 (2 sh) required for American Chemical Society certification
(2) Chemistry/Pre-Med program requires BI105, BI120, BI263, BI331, BI352, and CH351

BACHELOR OF SCIENCE IN EDUCATION in CHEMISTRY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **54**
Mathematics: MA121
Natural Science: PY111/121-112/122
Social Science: HI104, PC101
Science/Math electives: MA122

MAJOR: **33-35**
Required courses:

CH113	Concepts in Chemistry I	4 sh
CH114	Concepts in Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH232	Organic Chemistry II	4 sh
CH321	Quantitative Analysis	4 sh
CH322	Instrumental Analysis	4 sh
CH341	Physical Chemistry I	4 sh
CH343	Physical Chemistry Laboratory I	1 sh
CH498	Problems in Chemistry	1-2 sh

Controlled electives:
One additional chemistry course from list: 3-4 sh
CH342, CH351, CH411

OTHER REQUIREMENTS: **34**

BI105	Cell Biology	4 sh

Professional education sequence:

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching Clinical Experience I	1 sh
ED342	Pre-student Teaching Clinical Experience II	1 sh
ED421	Student Teaching	12 sh
ED442	School Law	1 sh
ED451	Teaching Science in the Secondary School	3 sh
EP302	Educational Psychology	3 sh

EP377	Educational Tests and Measures	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 1-3

TOTAL DEGREE REQUIREMENTS: 124

MINOR in CHEMISTRY

MINOR: 20

Required courses:

CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh
CH231	Organic Chemistry I	4 sh
CH232	Organic Chemistry II	4 sh
One chemistry elective from CH321, CH323, CH351		4 sh

COMPUTER SCIENCE DEPARTMENT

THOMAS P. CUNNINGHAM, CHAIRPERSON; BUTERBAUGH, CROSS, MAPLE, McKELVEY, MICCO, OBLITEY, SHUBRA, SWEENEY, WATTS, WOLFE

The program in Computer Science at IUP leads to the B.S. or B.A. degree and is designed primarily to prepare graduates for productive work in highly computer-dependent areas of business, government, and industry. In recent years, majors graduating from the program have attained their first jobs in business applications, programming and systems analysis, computer software development, scientific and applied mathematical programming, other computer related areas, and graduate school.

In a rapidly developing field such as Computer Science, it is important that the graduate's education be broad and fundamental so that new trends can more readily be followed. Our goal is to balance fundamentality and breadth with sufficient supervised practice so that our graduates are productive at the time they graduate but ready and willing to change with the field.

Most applied computer scientists work in cooperation with professionals trained in other areas and with managers. Hence, the ability to work and communicate with others of different educational backgrounds is an important characteristic. To that end, we encourage computer science majors to take a strong minor (or area concentration) in a second area of interest. Some students may wish to double major. Majors in other curriculums at IUP are also welcome to take Computer Science courses for which they are qualified or a Computer Science minor.

Students majoring in Computer Science should set their goals beyond simple programming and should be preparing

1. to program well, both in design and implementation phases, and document what they have programmed, and
2. to analyze real-world problems in preparation for program design and implementation, and
3. to manage activities that are strongly computer dependent, or
4. to improve the tools that programmers and systems analysts use, i.e., to develop
   a. better machine systems
   b. better software systems
   c. better languages for communicating with machines or
   d. better methods for solving intractable problems or
5. to teach about computers at college or high school level or
6. to advance the fundamental theory of digital information processors.

BACHELOR OF SCIENCE in COMPUTER SCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **54**

Humanities: Foreign Language III and IV

Mathematics: 1) a finite mathematics course (MA102 Finite Mathematics)
2) Calculus consisting of
MA123, Calculus for Physics and Chemistry
or MA127, Calculus I
or MA121 and 122, Calc I and II for Bus, Nat and Soc Sci
3) Statistics consisting of
MA216, Probability and Statistics for Natural Sciences
or MA363 and 364, Mathematics Statistics I and II
or MA214, Probability and Statistics for Business majors,
MA217, Probability and Statistics, and MA 417,
Statistical Applications

MAJOR: **30**

Required courses:

CO110	Introduction to Computer Science	3 sh
CO220	Applied Computer Programming	3 sh
CO250	Introduction to Numerical Methods	3 sh
CO300	Assembly Language Programming	3 sh
CO310	Data Structures	3 sh
CO315	Large File Organization and Access	3 sh
CO380	Seminar on the Computer Profession	1 sh
CO480	Seminar on Technical Topics	1 sh

Controlled electives:

CO electives from 10 sh(1)
CO320, CO345, CO360, CO370, CO493(2), CO410,
CO420, CO430, CO441, CO450, CO460, CO470, CO481, or CO485

OTHER REQUIREMENT: **9-18**

Completion of one of the following: 9-20 sh(3)

a) Minor from College of Natural Sciences and Math
b) Minor (concentration) from approved business courses (18 minimum)
c) Nine additional hours CO electives, including 4 hours of CO493 or CO485.

FREE ELECTIVES: **20-31**

TOTAL DEGREE REQUIREMENTS: 124

(1) At least 3 sh must be from CO410, CO420, CO430, CO441, CO450, CO460.
(2) No more than 4 sh from CO493 applied to 30 sh minimum.
(3) The student who selects free electives in place of this requirement will be awarded a B.A. degree in Computer Science.

MINOR in COMPUTER SCIENCE

MINOR: **15**

Required courses:

CO220	Applied Computer Programming	3 sh(1)
Other CO electives		12 sh(2)

(1) Appropriate background may be CO110, IM241, or other competence determined by department.
(2) CO200 Introduction to Computers is an appropriate entry course for minors or for students who wish to take only one course.

GEOSCIENCE DEPARTMENT

FRANK W. HALL II, CHAIRPERSON; CERCONE, CLARK, PARK, PRINCE, RICHARDSON, SUTTON, TAYLOR

The Geoscience Department provides curriculums in areas of natural science dealing with and related to the earth and its environment by offering courses in astronomy, geology, meteorology, and oceanography.

In addition to on-campus instruction, opportunities exist for summer coursework and research in geology and oceanography at the Marine Science Consortium located at Wallops Island, Virginia.

Degrees offered by the Geoscience Department are the Bachelor of Science in Geology, the Bachelor of Science in Geoscience, and the Bachelor of Science in Education with a major in Earth and Space Science or with a major in General Science. The first two degree programs are under the College of Natural Sciences and Mathematics, and the last two are under the College of Education.

The department also will act in an advisory capacity for students enrolled in the B.S. in Natural Science with concentrations in Astronomy, Meteorology, or Oceanography. These degree programs are designed to prepare students for graduate work in the aforementioned disciplines.

The B.S. degree in Geology is, in a sense, a dual-purpose degree program. Not only is it designed to graduate well-trained, competent geologists, able to compete for positions as professional geologists in the job market; it is also designed to provide the student with the necessary allied science and mathematics background to enable the good student to qualify for admission to the graduate school of his/her choice in Geology.

The B.S. degree in Geoscience offers the student a broad-based science background. In addition to the 38 semester hours of Geoscience (Astronomy, Geology, Meteorology, Oceanography) the student will also acquire a strong background in Mathematics and the Allied Sciences of Chemistry, Biology, and Physics. The student who earns the B.S. degree in Geoscience may anticipate career openings in government or private industry in those expanding fields directly associated with environmental studies. The B.S. in Geoscience will also prepare students for admission to graduate study, should they choose to pursue academic preparation beyond the undergraduate level.

The department recognizes as one of its functions the role of serving the field of public education by the preparation of qualified and certified teachers of earth and space science. Also, because of the interdisciplinary nature of both the department and the requirements for preparing general science teachers, the department administers the program designed to lead to general science certification and includes majors of that category as department members.

Minor in Geology

The minor in geology consists of seventeen semester hours of geology. General Geology I and II lecture and laboratory are required. The remaining nine semester hours of geology may be selected from the department's list of 300 or 400 level geology courses. It is recognized that the anthropology student minoring in geology would benefit from courses differing in content from those benefiting students who, for example, are majoring in Urban Planning. The department staff members will be happy to consult with students concerning their special needs.

Minor in Geoscience

The requirement for the minor in Geoscience will be sixteen semester hours of geoscience, taken within the following framework. Students must complete one course in each discipline within the department: Astronomy, three semester hours; Geology, four semester hours; Meteorology, three semester hours; Oceanography, three semester hours, for a total of thirteen semester hours. The additional 3 semester hours can be taken in any one of the aforementioned disciplines. The nonmajor General Astronomy course will not be acceptable toward the minor in Geoscience.

BACHELOR OF SCIENCE in GEOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **54**

Humanities: Foreign Language III and IV
Mathematics: MA121
Natural Science: CH111-112
Science/Math electives: MA122

MAJOR: **36 (1)**

Required courses:

GS121	General Geology I	3 sh
GS122	General Geology I Laboratory	1 sh
GS131	General Geology II	3 sh
GS132	General Geology II Laboratory	1 sh
GS321	Mineralogy	3 sh
GS322	Igneous and Metamorphic Petrology	3 sh
GS325	Structural Field Geology I	3 sh
GS330	Paleontology	3 sh
GS362	Marine Geology and Plate Tectonics	3 sh
GS411	Sedimentary Petrology	3 sh
GS480	Geoscience Seminar	1 sh

Controlled electives:

Courses from list: GS324, 326, 327, 335, 412, 420, 432, 440, 441, 481, 482, 493 — 9 sh (1) (2)

OTHER REQUIREMENTS: **11**

Additional Science:

PY111	Physics I Lec	3 sh
PY112	Physics II Lec	3 sh
PY121	Physics I Lab	1 sh
PY122	Physics II Lab	1 sh

One geoscience course from list: 3 sh
GS341, GS342, GS361, or GS371

FREE ELECTIVES: 23

TOTAL DEGREE REQUIREMENTS: 124

(1) Summer Field Camp in geology (5-9sh) is strongly recommended.
(2) A maximum of six credits from approved summer field camp may apply to controlled electives.

BACHELOR OF SCIENCE in GEOSCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 54
Humanities: Foreign Language III and IV
Mathematics: MA121
Natural Science: PY111-112 with labs
Science/Math elective: MA122

MAJOR: 36
Required courses:

GS121	General Geology I	3 sh
GS122	General Geology I Laboratory	1 sh
GS131	General Geology II	3 sh
GS132	General Geology II Laboratory	1 sh
GS321	Mineralogy	3 sh
GS322	Igneous and Metamorphic Petrology	3 sh
GS325	Structural Field Geology I	3 sh
GS326	Structural Field Geology II	3 sh
GS341	Solar System	3 sh
GS361	Physical Oceanography	3 sh
GS371	Meteorology	3 sh
GS480	Geoscience Seminar	1 sh

Controlled electives:

Other Geoscience or Geology courses		6 sh

OTHER REQUIREMENTS: 17
Biology sequence

BI105	Cell Biology	4 sh
BI110 or 120	Plant or Animal Biology	5 sh

Chemistry sequence

CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh

FREE ELECTIVES: 17

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in EARTH AND SPACE SCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53
Mathematics: MA121
Natural Science: CH111-112
Social Science: HI104, PC101
Science/Math elective: CO110

MAJOR: 39

Required courses:

BI311	Environmental Biology	4 sh
GS121	General Geology I	3 sh
GS122	General Geology I Lab	1 sh
GS131	General Geology II	3 sh
GS132	General Geology Lab II	1 sh
GS341	Solar System	3 sh
GS342	Stellar Astronomy	3 sh
GS350	Operation of the Planetarium	1 sh
GS361	Oceanography	3 sh
GS371	Meteorology I	3 sh
PY111	Physics I Lec	3 sh
PY112	Physics II Lec	3 sh
PY121	Physics I Lab	1 sh
PY122	Physics II Lab	1 sh

Controlled electives:

Geology electives 6 sh

OTHER REQUIREMENTS: 30

Professional Education sequence

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED451	Teaching Science in the Secondary Schools	3 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurements	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 2

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in GENERAL SCIENCE EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 45

Mathematics: MA121
Natural Science: (covered in major)
Social Science: HI104, PC101

MAJOR: 37

Required courses:

BI103	General Biology I	4 sh
BI104	General Biology II	4 sh
CH111	General Chemistry I	4 sh
CH112	General Chemistry II	4 sh
PY111	Physics I Lec	3 sh
PY112	Physics II Lec	3 sh
PY121	Physics I Lab	1 sh
PY122	Physics II Lab	1 sh
GS121	General Geology I	3 sh
GS122	General Geology Lab	1 sh
GS371	Meteorology	3 sh

Controlled electives:			
GS341 or GS342		3 sh	
One additional science course		3 sh	
OTHER REQUIREMENTS:			30
Professional Education sequence			
CM301	Instructional Media	3 sh	
ED242	Pre-student Teaching I	1 sh	
ED342	Pre-student Teaching II	1 sh	
ED451	Teaching Science in the Secondary Schools	3 sh	
ED441	Student Teaching	12 sh	
ED442	School Law	1 sh	
EP302	Educational Psychology	3 sh	
EP377	Educational Tests and Measurements	3 sh	
FE302	History and Philosophy of Education	3 sh	
FREE ELECTIVES:			12

TOTAL DEGREE REQUIREMENTS: 124

MATHEMATICS DEPARTMENT

JOHN BROUGHTON, CHAIRPERSON; ANDERSON, ANGELO, BALENOVICH, BERTNESS, BURIOK, BUSOVICKI, A. DAVIS, DUBOVSKY, DUNCAN, EARLY, FELDMAN, D. FRANK, GIAMBRONE, HARTMAN, HENNEMANN, MADERER, D. McBRIDE, R. McBRIDE, MITCHELL, MUELLER, PETERS, REBER, RETTIG, D. SHAFER, SHAWER, SHEPLER, W. SMITH, SPEAKMAN, STEELMAN, STEMPIEN, STILWELL, R. WOLFE, M. WOODARD

The Mathematics Department prepares students for work in industry, graduate school mathematics, and teaching. Degrees offered by the Department are the Bachelor of Science in Mathematics, the Bachelor of Science in Applied Mathematics, and the Bachelor of Science in Education with a Mathematics major. The first two degree programs are offered within the College of Natural Sciences and Mathematics and the third is with the College of Education. The department also offers a minor in Mathematics and a minor in Applied Statistics. The program for a mathematics major in the College of Natural Sciences and Mathematics is two-phased. A student may pursue a degree in Applied Mathematics or Mathematics. Those completing a degree in Mathematics will be prepared to continue their studies in mathematics in graduate school, though some may enter business, industry, or government service. Those students receiving a degree in Applied Mathematics will be primarily prepared to enter business, industry, or government service in an area where mathematics or computer science is used or to continue their studies in applied mathematics or computer science in graduate school. This student would not be expected to continue graduate studies in pure mathematics.

The program leading to the B.S. in Education with a Mathematics major prepares the student for teaching mathematics in junior or senior high school. Many graduates, however, continue their formal education in mathematics at the graduate level or work in government or industry.

Elementary education majors may elect to take a concentration of at least fifteen hours in mathematics. The program of courses for this concentration is as follows: In addition to MA151 and MA152, select nine hours from the following courses: MA317, MA420, MA450, MA456, MA457, MA458, MA459, MA471, or MA483.

Minor in Mathematics

The minor in Mathematics consists of a minimum of seventeen semester hours in mathematics made up of any two-semester sequence in calculus and additional semester hours selected from courses for mathematics majors. This excludes MA010, 101, 110, 214, 217, 417, 482, 483. Additionally, MA102 will be credited toward minor only with special permission of adviser or chairperson. A maximum of twelve credits from the following courses can count toward the minor: MA102, 121, 122, and 216.

Minor in Applied Statistics

The minor in Applied Statistics consists of a minimum of 17 semester hours in Mathematics selected as follows: Required are (a) MA121, 123, or 127; (b) Choice of at least one of the following: MA102, MA122, MA171; (c) Choice of MA214, 216, or 217; (d) MA417. The remaining semester hours may be chosen from appropriate courses in Statistics, MA418, MA481-3, or mathematics courses approved by designated adviser in the Mathematics Department.

A cumulative QPA of at least 2.0 in MA courses is required for a minor in Mathematics or Applied Statistics. The Mathematics Department will not certify that a transfer student has completed a minor unless the student has completed at least one course in the IUP Mathematics Department.

BACHELOR OF SCIENCE in APPLIED MATHEMATICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			**49**
Humanities: Foreign Language III and IV			
Mathematics: (included in major)			
Science/Math electives: CO110			
MAJOR:			**36**
Required courses:			
MA127	Calculus I	4 sh	
MA128	Calculus II	4 sh	
MA171	Introduction to Linear Algebra	3 sh	
MA227	Calculus III	4 sh	
MA271	Introduction to Algebraic Structures	3 sh	
Controlled electives:			
Two courses from list: MA371, 421, 422, 423, 424, 427, 476, 477		6 sh	
Additional MA credit from major courses		12 sh(1)	
OTHER REQUIREMENTS:			**6**
Computer Science:			
CO250	Introduction to Numerical Methods	3 sh	
CO450	Applied Numerical Methods	3 sh	
FREE ELECTIVES:			**33**
		TOTAL DEGREE REQUIREMENTS:	**124**

(1) A student may select courses to fulfill requirements for specialized track.
   a. Actuarial/Statistics: MA363, 364, 421, 422, 446, 465
   b. Scientific/Engineering: MA241, 342, 363, 364, 371, 423, 445, 446
   c. Math Analyst: MA241, 342, 363, 364, 371, 445, or 446, 476 CO minor.

BACHELOR OF SCIENCE in MATHEMATICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 49
- Humanities: Foreign Language III and IV
- Mathematics: (included in major)
- Science/Math electives: CO110

MAJOR: 36

Required courses:

MA127	Calculus I	4 sh
MA128	Calculus II	4 sh
MA171	Introduction to Linear Algebra	3 sh
MA227	Calculus III	4 sh
MA271	Introduction to Algebraic Structures	3 sh

Controlled electives:

Four courses from list: MA371, 421, 422, 423, 424, 427, 476, 477	12 sh
Additional MA credits from majors courses	6 sh(1)

OTHER REQUIREMENTS: 0

FREE ELECTIVES: 39

TOTAL DEGREE REQUIREMENTS: 124

(1) A student may select courses to fulfill requirements for specialized track.
- a. Actuarial/Statistics: MA363, 364, 421, 422, 446, 465
- b. Scientific/engineering: MA241, 342, 363, 364, 371, 423, 445, 446
- c. Math Analyst: MA241, 342, 363, 364, 371, 445, or 446, 476 CO minor.

BACHELOR OF SCIENCE IN EDUCATION in MATHEMATICS EDUCATION

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 49
- Mathematics: (included in major)
- Social Science: HI104, PC101
- Science/Math Elective: CO110

MAJOR: 31

Required courses:

MA127	Calculus I	4 sh
MA128	Calculus II	4 sh
MA171	Introduction to Linear Algebra	3 sh
MA227	Calculus III	4 sh
MA271	Introduction to Algebraic Structures	3 sh
MA355	Foundations of Geometry I	3 sh
MA363	Mathematical Statistics I	3 sh

Controlled electives:

One course from list MA452, 453, 454	1 sh
One course from list MA353, 371, 421, 476	3 sh
One additional MA majors course	3 sh

OTHER REQUIREMENTS: **30**

Professional Education sequence

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED456	Teaching Mathematics in the Secondary Schools	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurements	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: **14**

TOTAL DEGREE REQUIREMENTS: 124

NATURAL SCIENCES

CHARLES R. FUGET, DIRECTOR; BALLAS, GAGGINI, MUELLER, SCROXTON, WOODARD

The program leading to the Bachelor of Science degree in Natural Science is designed to prepare students for various professional schools - optometry, podiatry, pharmacy, dentistry (the natural science major is not recommended for medical school preparation). The degree is offered by the College of Natural Sciences and Mathematics.

BACHELOR OF SCIENCE in NATURAL SCIENCE

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **38**

Humanities: Foreign Language III and IV
Mathematics: listed in major (MA121 recommended)
Natural Science: listed in major
Science/Math electives: listed in major (CO recommended)

MAJOR: **45-46**

Controlled electives:

BI courses	14 sh
CH courses	16 sh
PY courses	8 sh
MA/CO courses	7-8 sh

OTHER REQUIREMENTS: **0**

FREE ELECTIVES: **41-40**

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE in NATURAL SCIENCE/ Pre-Astronomy Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **53**

Humanities: Foreign Language III and IV
Mathematics: MA123
Natural Science CH111-112
Science/Math electives: CO110

MAJOR: 33

Required courses:

PY131	Physics I-C Lec	3 sh
PY132	Physics II-C Lec	3 sh
PY141	Physics I-C Lab	1 sh
PY142	Physics II-C Lab	1 sh
PY222	Mechanics I	2 sh
PY223	Mechanics II	2 sh
PY242	Optics	3 sh
PY322	Electricity and Magnetism I	2 sh
PY323	Electricity and Magnetism II	2 sh
GS121	General Geology I	3 sh
GS122	General Geology Lab I	1 sh
GS131	General Geology II	3 sh
GS132	General Geology Lab II	1 sh
GS341	Solar System	3 sh
GS342	Stellar Astronomy	3 sh

OTHER REQUIREMENTS: 10

CO250	Introduction to Numerical Methods	3 sh
MA124	Calculus II for Physics and Chemistry	4 sh
MA241	Differential Equations	3 sh

FREE ELECTIVES: 28

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE in NATURAL SCIENCE/ Pre-Meteorology or Oceanography Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Humanities: Foreign Language III and IV
Mathematics: MA123
Natural Science: CH111-112
Science/Math elective: CO110

MAJOR: 43-46

Required courses:

CH321	Quantitative Analysis	4 sh
CH341	Physical Chemistry	4 sh
PY131	Physics I-C Lec	3 sh
PY132	Physics II-C Lec	3 sh
PY141	Physics I-C Lab	1 sh
PY142	Physics II-C Lab	1 sh
PY222	Mechanics I	2 sh
PY233	Mechanics II	2 sh
PY342	Thermal and Statistical Physics	3 sh

Controlled electives:

One sequence from list: BI103-104 or BI105-120	8-9 sh
One sequence from list: GS361-362 or GS371-372	6 sh
One sequence from list: GS121 & 122-131 & 132 or GS341-342	6-8 sh

OTHER REQUIREMENTS: 10

Additional math/computer sequence:

CO250	Introduction to Numerical Methods	3 sh
MA124	Calculus II for Physics	4 sh
MA241	Differential Equations	3 sh

FREE ELECTIVES: 18-15

TOTAL DEGREE REQUIREMENTS: 124

PHYSICS DEPARTMENT

RICHARD D. ROBERTS, CHAIRPERSON; BERRY, FOX, FREEMAN, GAGGINI, HERSHMAN, MATOLYAK, MATOUS, RAMSEY, RIBAN, WHITSON

The Physics Department aims to prepare fully qualified young men and women for careers in physics. Two degrees are offered within the College of Natural Sciences and Mathematics: the Bachelor of Science in Physics and the Bachelor of Arts in Physics. Each of these is adequate preparation for those wishing to enter a graduate program in physics or wishing to pursue research in industrial technology or for those wishing a strong physics background before aiming at their direct goal of medical research, air pollution control, etc. One degree is provided within the College of Education, the Bachelor of Science in Education with a Physics major. The department also provides a minor in Physics, as well as general science courses for those who wish to be truly liberally educated with a working knowledge of the rudiments of physical science.

In addition, a pre-engineering program is offered whereby a student may acquire the first two years' requirements at IUP and complete the remainder at the cooperating institution.

Minor in Physics

To minor in Physics, a student must successfully complete fifteen semester hours in Physics which must consist of at least three courses at the 200 level or higher. PY150 may be substituted with the permission of the chairperson.

Pre-Engineering (Chemical, Civil, Electrical, Materials, Mechanical)

Common to all engineering programs are the following science and mathematics requirements: *PY131/141, 132/142, 322, PY342, *MA123, *MA124, MA171, MA241 *CH111, *CH112 (*or appropriate substitute)

Further requirements depend on the particular engineering program chosen. Complete information regarding a specific program may be obtained from the Physics Department.

BACHELOR OF ARTS in PHYSICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Humanities: Foreign Language III and IV
Mathematics: MA123
Natural Science: PY131/141-132/142
Science/Math elective; CO110 or CO200

MAJOR:			28
Required courses:			
PY131	Physics I-C Lec	* sh	
PY132	Physics II-C Lec	* sh	
PY141	Physics I-C Lab	* sh	
PY142	Physics II-C Lab	* sh	
PY222	Mechanics I	2 sh	
PY223	Mechanics II	2 sh	
PY231	Electronics	4 sh	
PY322	Electricity and Magnetism I	2 sh	
PY323	Electricity and Magnetism II	2 sh	
PY331	Modern Physics	3 sh	
PY350	Intermediate Experimental Physics I	3 sh	
PY351	Intermediate Experimental Physics II	3 sh	
PY473	Quantum Mechanics I	4 sh	
Controlled electives:			
One additional PY majors course		3 sh	
OTHER REQUIREMENTS:			23
Additional mathematics:			
MA124	Calculus II for Physics and Chemistry	4 sh	
MA241	Differential Equations	3 sh	
MA342	Advanced Calculus for Applications	4 sh	
Additional natural science sequence		6 sh	
Additional social or natural science sequence (advanced)		6 sh	
FREE ELECTIVES:			20
		TOTAL DEGREE REQUIREMENTS:	124

BACHELOR OF SCIENCE in PHYSICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			53
Humanities: Foreign Language III and IV			
Mathematics: MA123			
Natural Science: PY131/141-132/142			
Science/Math electives: CO110 or CO200			
MAJOR:			37
Required courses:			
PY131	Physics I-C Lec	* sh	
PY132	Physics II-C Lec	* sh	
PY141	Phhysics I-C Lab	* sh	
PY142	Physics II-C Lab	* sh	
PY222	Mechanics I	2 sh	
PY223	Mechanics II	2 sh	
PY231	Electronics	4 sh	
PY242	Optics	3 sh	
PY322	Electricity and Magnetism I	2 sh	
PY323	Electricity and Magnetism II	2 sh	
PY331	Modern Physics	3 sh	
PY342	Thermal & Statistical Physics	3 sh	
PY350	Intermediate Experimental Physics I	3 sh	
PY351	Intermediate Experimental Physics II	3 sh	
PY473	Quantum Mechanics I	4 sh	

Controlled electives:
- One course from list: PY472 or PY490 — 3 sh
- One additional PY majors course — 3 sh

OTHER REQUIREMENTS: 14

Additional Mathematics:

MA124	Calculus II for Physics and Chemistry	4 sh
MA241	Differential Equations	3 sh
MA342	Advanced Calculus for Applications	4 sh

One from list: CO250, MA171, MA363, MA421, MA423 — 3 sh

FREE ELECTIVES: 20

TOTAL DEGREE REQUIREMENTS: 124

BACHELOR OF SCIENCE IN EDUCATION in PHYSICS

GENERAL EDUCATION: As outlined in General Education section with the following specifications: 53

Mathematics: MA123
Natural Science: CH111-112
Social Sciences: HI104, PC101
Science/Math electives: CO110 or CO200

MAJOR: 36

Required courses:

PY131	Physics I-C Lec	3 sh
PY132	Physics II-C Lec	3 sh
PY141	Physics I-C Lab	1 sh
PY142	Physics II-C Lab	1 sh
PY222	Mechanics I	2 sh
PY231	Electronics	4 sh
PY242	Optics	3 sh
PY322	Electricity and Magnetism I	2 sh
PY331	Modern Physics	3 sh
PY350	Intermediate Experimental Physics I	3 sh

Controlled electives:
- Physics electives — 3 sh

OTHER REQUIREMENTS: 41

Additional Math

MA124	Calculus II for Physics and Chemistry	4 sh
MA241	Differential Equations	3 sh
MA342	Advanced Calculus for Applications	4 sh

Professional Education Sequence

CM301	Instructional Media	3 sh
ED242	Pre-student Teaching I	1 sh
ED342	Pre-student Teaching II	1 sh
ED441	Student Teaching	12 sh
ED442	School Law	1 sh
ED451	Teaching of Science in the Secondary School	3 sh
EP302	Educational Psychology	3 sh
EP377	Educational Tests and Measurements	3 sh
FE302	History and Philosophy of Education	3 sh

FREE ELECTIVES: 2

TOTAL DEGREE REQUIREMENTS: 124

PSYCHOLOGY DEPARTMENT

DOUGLAS A. ROSS, CHAIRPERSON; ANDERSON, BERMAN, CARTWRIGHT, EDGAR, GOODWIN, GROVER, D. R. JACOBS, MAGEE, MARQUETTE, McHUGH, PATTON, PAVLOSKI, RICH, RITTLE, ROBERTSON, SCHNEIDER, STIRES, SUSSMANN, THORNTON, VANDECREEK, WALZ, ZANICH

The program in psychology leads to a Bachelor of Arts degree and is designed to give the student an understanding of the methods and major findings of the science of behavior, with an introduction to several areas of professional application. The major offers the background required for graduate work in psychology and also preparation for such related fields as social work, personnel work, advertising, medicine, law, and theology. The department also offers a minor in psychology.

An honors program has been developed to enrich the education of qualified psychology majors and assist such students in gaining entrance to graduate school by providing classroom and research experiences which will prepare them for work at the graduate level.

Psychology majors possessing at least a 3.0 quality-point index at the end of their third semester are eligible to apply for entrance into the honors program. The program itself consists of two research seminar courses and two semesters of independent research taken in addition to the normal requirements for the psychology major. These requirements are normally met on a one-course-a-semester basis throughout the four semesters of the junior and senior years. The two semesters of independent research are taken consecutively and are devoted to the completion of an honors thesis.

BACHELOR OF ARTS in PSYCHOLOGY

GENERAL EDUCATION: As outlined in General Education section with the following specifications:			52
Humanities: Foreign Language III and IV			
Mathematics: MA21			
Natural Science: BI103-104 recommended			
Social Science: PC101			
Science/Math: CO200			
MAJOR:			33
Required courses:			
PC290	Experimental Design and Analysis I	4 sh	
PC291	Experimental Design and Analysis II	4 sh	
Controlled electives:			
One course from each of these six core areas:			
A. Developmental Psychology: PC310, 311, 312		3 sh	
B. Individual Differences: PC320, 321, 322		3 sh	
C. Social/Environmental: PC330, 331		3 sh	
D. Cognition/Learning: PC340, 341, 342		4 sh	
E. Biological Bases of Behavior: PC350, 351, 352		4 sh	
F. Metatheoretical Perspectives in Psychology: PC410,411		3 sh	
Other PC electives beyond PC101		5 sh	
FREE ELECTIVES:			39
TOTAL DEGREE REQUIREMENTS: 124			

BACHELOR OF ARTS in PSYCHOLOGY/Applied Psychology Track

GENERAL EDUCATION: As outlined in General Education section with the following specifications: **52**

Humanities: Foreign Language III and IV
Mathematics: MA217
Natural Science: BI103-104 recommended
Social Science: PC101, EC121
Science/Math elective: CO200

MAJOR: **31**

Required courses:

PC290	Experimental Design and Analysis I	4 sh
PC291	Experimental Design and Analysis II	4 sh
PC342	Human Cognition, Memory, and Thinking	3 sh
PC420	Industrial-Organizational Psychology	3 sh
PC421	Psychology of Work	3 sh
PC493	Practicum	3 sh(1)

Controlled electives:

One course from each of these six core areas:

A. Developmental Psychology: PC310, 311, 312	3 sh
B. Individual Differences: PC320, 321, 322	3 sh
C. Social/Environmental: PC330, 331	3 sh
D. Biological Bases of Behavior: PC350, 351, 352	4 sh
E. Metatheoretical Perspectives in Psychology: PC410,411	3 sh

OTHER REQUIREMENTS: Outside concentration **15**

EC122	Principles of Economics II	3 sh
MG360	Management and Production Concepts	3 sh
3 courses, as approved by adviser (2)		9 sh

FREE ELECTIVES: **26**

TOTAL DEGREE REQUIREMENTS: 124

(1) Department recommends at least 6 credits of PC493: Practicum.
(2) Department highly recommends PC424 Planned Organizational Change and requires that one of the courses be either LR480: Collective Bargaining or EC330: Labor Economics.

MINOR in PSYCHOLOGY **17**

Required courses:

PC101	General Psychology	3 sh
MA217	Probability and Statistics	3 sh
PC290	Experimental Design and Analysis I	4 sh
One course from PC310, 311, 312, 320, 322, 330, 331		3 sh
One course from PC340, 341, 342, 350, 351, 352		4 sh
Other PC electives beyond PC101		3 sh

Military Science

LTC JOHN D. AUGER, CHAIRPERSON; MAJ JERRY S. WILSON, MAJ MICHAEL BURK, CPT CHARLES DRAXLER, CPT ROBERT F. HENDERSON, CPT JOHN MAGUIRE, CPT ALLAN G. ROSS, CPT LINFORD T. SAYLOR, CPT WILLIAM TURNER, MSG ZADE Q. EBERLIN, SFC TIMOTHY BOORMAN, SFC RALPH JULIAN, SSG GILBERTO WOLMERS, DAC WILLIAM L. GOSS, DAC DONNA S. RANKIN

IUP is an authorized Senior Reserve Officer's Training Corps (ROTC) unit. The ROTC program offers to both men and women the opportunity to learn and practice leadership and managerial techniques that will prove beneficial to all life's future endeavors; to obtain credits which count toward graduation; and, to those who choose to complete the total program, to obtain a commission as a second lieutenant in the US Army.

Regular ROTC classes for two semesters satisfy the mandatory university requirement for taking Health and Physical Education classes.

ENROLLMENT

The program is broken into two phases: the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years).

REGULAR BASIC COURSE - The first two years of military science provide a background of the historical role of military forces as well as current national military objectives. In addition, basic leadership is developed and certain skills are taught such as adventure training, survival training, map reading, scuba diving, rappelling, and marksmanship. Enrollment in any of the freshman- or sophomore-level ROTC courses (MS101, 102, 203, or 204) in no way obligates or commits the student to any military service or any further ROTC courses. These courses are offered on the same basis as other academic courses at IUP with the privilege of withdrawing at any time.

ADVANCED COURSE - The last two years constitute the Advanced Course of instruction for both men and women who desire a commission as a second lieutenant in the Army of the United States (either the Army Reserve, National Guard, or, for selected students, the Regular Army). This phase is composed of studies in advanced leadership and management, tactics, military law, and psychological, physiological, and social factors which affect human behavior. Modern instructional and training techniques are also covered. Practical application is the rule, and students have the opportunity to practice and polish their skills. Participation in the Advanced Course will earn the student approximately $2,500, between $100-a-month subsistence and pay for summer camp ($1,800 is not taxable). For continuation in the ROTC during the junior and senior years, the student must have a 2.0 grade-point average in the student's academic area, have successfully completed requirements for the ROTC Basic Course, pass a physical examination, and be accepted by the Professor of Military Science (PSM). Advanced Course students must agree in writing to complete the junior and senior years, since they will receive $100-a-month subsistence during these school years.

REQUIREMENTS FOR ENROLLMENT

The general requirements for enrollment in ROTC are that the student be accepted by the university as a regular enrolled student, a citizen of the United States, physically qualified, and not less than fourteen years of age but less than twenty-seven at anticipated graduation date. Veterans and Junior ROTC graduates may receive exemption from the ROTC Basic Course as approved by the PMS.

WHAT ROTC OFFERS

Equipment, ROTC textbooks, and uniforms are issued without cost to enrolled students.

Credit is given for successful completion of the four-semester-hour Health and Physical Education General Education requirement for graduation.

Students formally enrolled in the Advanced Course (MS305, 306, 407, and 408) are paid a subsistence allowance (currently $100 a month) during the school year.

Training is given in other practical skills such as scuba diving, adventure training, rappelling, markmanship, orienteering, first aid techniques, and water safety.

Opportunities are available to examine the military profession in detail. This includes the Regular Army, National Guard, and Army Reserve.

If students so desire and are accepted into the Advanced Course, they will receive commissions as second lieutenants upon graduation from the university and serve either three years' continuous active duty or three months' active duty for training, with the remaining obligation served in the Army Reserve or National Guard.

The School of Continuing Education

NICHOLAS E. KOLB, DEAN

The mission of the School of Continuing Education is to serve the lifelong, educational needs of nontraditional students, working adults, professional organizations, local and state agencies, and the citizens of the commonwealth, by providing access to the academic and human resources of IUP.

The School of Continuing Education was created by the IUP Board of Trustees in May, 1966. Today, the school comprises the Division of Credit Programs, the Division of Conferences and Noncredit Programs, the Highway Safety Center, and the Criminal Justice Training Center. The school is characterized by its commitment to academic excellence and high-quality programs. The school maintains a dynamic environment which fosters innovation and experimentation in order to continually improve programs and respond to the ever-changing needs of society.

DIVISION OF CREDIT PROGRAMS

Edward W. Nardi, Director

The Division of Credit Programs offers a variety of opportunities for the adult and nontraditional learner to access the academic resources of IUP on a part-time basis. Courses may be selected from day or evening offerings.

Associate of Arts Degree in General Studies

The Associate of Arts Degree in General Studies is designed for the nontraditional or adult learner who seeks to acquire a broad base of knowledge in the liberal arts. This degree program provides opportunity to select courses across a wide range of disciplines. The degree program consists of 62 credits which are selected under the advisement of the School of Continuing Education.

Part-time Studies Program (Nondegree)

The Part-time Studies Program is designed to offer the adult and nontraditional learner the opportunity to begin or renew college education at IUP. Through this program an individual may enroll in undergraduate credit courses to pursue personal interests, acquire new skills, or to work toward formal admission to degree candidacy. Credit earned in this program may be applied to a degree upon formal admission to an IUP degree program.

Postbaccalaureate Program

The Postbaccalaureate Program is designed to provide access to undergraduate courses to individuals who have an earned baccalaureate degree. Students may be seeking a second bachelor's degree, teacher certification, or personal enrichment.

Off-campus Studies Program

The Off-campus Studies Program is designed to support the efforts of IUP and its faculty to offer academic programs and credit courses to specific groups of individuals through the on-site delivery of university courses. The Master of Science in Safety Sciences is offered in Harrisburg and in Oakmont, Pennsylvania. The Master of Business Administration is also available at the Oakmont location. In addition, undergraduate courses are available periodically at various off-campus locations throughout the commonwealth.

Adult Advisement Services

Adult Advisement Services provides the part-time, nontraditional, and adult learner access to academic exploration and planning through individual conferences and workshops. Seminars are offered throughout the year to provide the opportunity for adult learners to become acquainted with the many resources of the university.

DIVISION OF CONFERENCES AND NONCREDIT PROGRAMS

Barbara A. Ender, Director

The division offers a wide variety of noncredit programs in an effort to meet community needs in the areas of public service, professional development, and personal enrichment.

Business, Industry, and Labor

Courses and workshops are offered in the following areas: Computer Literacy, Management Development, Small Business Development, Certified Public Accountant Series, and Customized Training. Certificate programs include Real Estate, Paralegal, and Labor Studies. Courses may be offered at IUP or at the business/industry site, as preferred.

Community-University Studies

Noncredit courses and workshops are offered in Indiana, Kittanning, and Punxsutawney. Personal growth and enrichment topics include creative leisure, self-improvement, fitness, culinary arts, languages, money and finances, art/music/literature, special focus series, and more. There are no exams, no grades, and no pressure. The program is provided as a service to the community.

Health and Human Services

The education and training needs of health and human service professionals are met through course offerings, one-day workshops, seminars, and conferences. Programs are frequently offered on-site and are designed to meet the specific needs of various professionals within the health field.

Conferences

The division facilitates conferences offered by academic departments and hosts off-campus groups and organizations during the summer conference season.

Special Programs

Youth Experiences in Summer (YES) and Elderhostel provide educational enrichment opportunities for a broad segment of the community — spanning kindergarten through retirement. Mornings with the Professors is a regular fall and spring series designed to present a variety of topics and faculty to the public in Kittanning and Indiana.

HIGHWAY SAFETY CENTER

Richard J. Hornfeck, Ph.D.

IUP's Highway Safety Center attempts to address the highway safety needs of the commonwealth through a variety of programs and activities. The Highway Safety Center programs encompass activity in five major areas: 1) research, surveys, and studies, 2) education (teaching), 3) training and conferences, 4) field and extension services, and 5) traffic safety communications and information exchange.

Teacher Certification in Driver Education

Through cooperative effort with IUP's Department of Health and Physical Education, the Highway Safety Center coordinates and directs IUP's Teacher Certification Program in Driver Education.

Pennsylvania's Volunteers for Highway Safety Center

Under contract with Pennsylvania's Department of Transportation, IUP's Highway Safety Center provides coordination and support to the various volunteer groups in the commonwealth involved in highway safety activities.

Driver Training Programs

From basic driver education programs for beginning drivers to advanced driver training programs in emergency driving techniques, the Highway Safety Center provides a cadre of courses all designed to meet the needs of the student.

Emergency Services Training

This is a large diversified program area designed to meet the training needs of ambulance, fire, and police personnel in the areas of emergency medical services and rescue.

Motorcycle Safety Program

MSP is a statewide motorcycle riding program funded by the Pennsylvania Department of Transportation to help reduce the rising number of serious motorcycle accidents. MSP was designed to offer all riders — both novice and the experienced — the opportunity to learn how to handle a motorcycle correctly, safely, and with confidence in all riding situations.

Traffic Accident Investigation

Traffic Accident Investigation programs are available for safety directors, insurance adjusters, and police personnel. Courses from basic investigation up to and including accident reconstruction.

CRIMINAL JUSTICE TRAINING CENTER

Gary M. Welsh, Director

The Criminal Justice Training Center's role in both the university and the community is to provide quality education and training programs for the continuing professionalism of the criminal justice system.

These programs include seminars for in-service personnel in fulfillment of mandatory continuing education requirements. They are conducted on an "as needed" basis covering an unlimited range of topics, such as vehicle and criminal law updates, search and seizure, accident investigation, alcohol enforcement, and driver proficiency. Grant-funded programs may be written and conducted in the above programs. Special programs are provided to offer the basic 480-hour academy training required for law enforcement service under Mandatory Act 120. Training under the Lethal Weapons Act 235 provides the basic requirements and mandatory recertification for armed security personnel.

Course Descriptions

Credit designation at right of title is expressed in (c) class hours per week, (l) lab or (d) discussion section hours per week, and (sh) semester hours of credit per semester.

AD: ADMINISTRATIVE SERVICES

Department of Administrative Services and Business Education
College of Business

AD 101 BUSINESS ORGANIZATION AND MANAGEMENT 3c-0l-3sh
Overview of the principles, practices, and methods common to most business firms in a private enterprise system. (Not open to juniors and seniors in Business Administration.)

AD 221 BUSINESS TECHNICAL WRITING 3c-0l-3sh
Prerequisite: EN101, 102
Application of business and technical writing styles, letters, memos, reports, procedures, and manuals are some areas of concern. Emphasis on clear, concise writing style.

AD 235 INTRODUCTION TO BUSINESS LAW 3c-0l-3sh
Introduction to legal systems, torts, contracts, and sales law.

AD 321 BUSINESS AND INTERPERSONAL COMMUNICATIONS 3c-0l-3sh
Prerequisite: Junior status
Study of communication theory and principles as applied to business situations and practices; development of communication skills in areas of communication such as oral, writing, listening, and nonverbal. Emphasis in building effective interpersonal relations in a business environment.

AD 336 LAW OF BUSINESS ORGANIZATIONS 3c-0l-3sh
Prerequisite: AD235
A study of the law dealing with commercial paper, agency, partnerships, corporations, and bankruptcy.

AD 337 CONSUMER LAW 3c-0l-3 sh
Nature of law as it pertains to the consumer. Attention to consumer protection relationships; real and personal property; credit; environmental law; law pertaining to employment; landlord-tenant relationships; product liability; insurance and family law.

AD 382 REAL ESTATE FUNDAMENTALS 3c-0l-3sh
Designed to acquaint the student with the language, principles, and laws that govern the business of real estate. Emphasis on the underlying concepts of land, property, rights in realty, and the means, methods, and laws that govern the conveyance of these rights. Required course for taking the Pennsylvania Real Estate Salesman's Exam.

AD 412 ADMINISTRATIVE OFFICE SERVICES 3c-0l-3 sh
Prerequisite: Junior status
Presentation of fundamental principles and practices used in the development of an office. Specialized areas such as systems analysis, work simplification, forms design, word processing, office machines and equipment, records management, office design and layout, office location and physical environment, office supervision, office manuals, and development of office personnel will be discussed.

AD 413 WORD PROCESSING CONCEPTS 3c-0l-3 sh
Comprehensive overview of word processing designed to acquaint the student with the concept of a modern word processing center including equipment, procedures, and personnel.

AD 415 RECORDS ADMINISTRATION 3c-0l-3 sh
Prerequisite: Junior status
Development of the principles of records administration including creation, use, maintenance, and destruction. Storage facilities, records classification, forms analysis, control of records, as well as micro-image systems will be discussed.

AD 421 PREPARATION AND PRESENTATION OF BUSINESS REPORTS 3c-0l-3 sh
Prerequisite: Junior status
Application of business and technical writing styles. Formats, visual aids, motivation techniques, special reports, and oral presentations are some areas of concern.

AD 430 OFFICE SYSTEMS 3c-0l-3 sh
Prerequisites: IM241, AD412, AD413, and AD415
Primarily for the Office Administration major, integrates the concepts of the various courses in the administrative services area.

AD 481 SPECIAL TOPICS IN ADMINISTRATIVE SERVICES, BUSINESS EDUCATION, OR DISTRIBUTIVE EDUCATION 3c-0l-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business

AD 482 INDEPENDENT STUDY IN ADMINISTRATIVE SERVICES, BUSINESS EDUCATION, OR DISTRIBUTIVE EDUCATION var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business

AD 493 INTERNSHIP IN OFFICE ADMINISTRATION var-6sh
Prerequisites: Senior status, approval of internship coordinator and 2.75 overall GPA and 3.0 GPA in Business
A supervised office experience program with an approved agency (business, industry, and government); includes three two-hour, on-campus seminars.

AG: ACCOUNTING

Department of Accounting
College of Business

AG 201 ACCOUNTING PRINCIPLES I 3c-0l-3 sh
Introduces the student to the accounting cycle in service and merchandising concerns using the single proprietorship form of business organization; covers use of special journals and subsidiary ledgers in the accounting system as well as accounting and internal control procedures for cash, receivables, inventory, and plant and equipment.

AG 202 ACCOUNTING PRINCIPLES II 3c-0l-3sh
Prerequisite: 2.0 GPA in AG201
Covers accounting principles and procedures for payroll, partnerships, corporations, long-term liabilities and investments, and manufacturing firms with a general accounting system. Introduces the student to cost accounting systems, financial statements analysis, budgeting, and use of accounting information in making managerial decisions.

AG 300 MANAGERIAL ACCOUNTING 3c-0l-3 sh
Prerequisite: AG202
Emphasizes the use of accounting information in performing the managerial functions of planning, control, decision making, and performance evaluation.

AG 301 INTERMEDIATE ACCOUNTING I 3c-0l-3sh
Prerequisite: AG202
An overview of the foundation of accounting theory dealing with application of generally accepted accounting principles as promulgated in professional pronouncements to the reporting process and to accounting for various asset items in the financial statements.

AG 302 INTERMEDIATE ACCOUNTING II 3c-0l-3 sh
Prerequisite: AG301
Application of generally accepted accounting principles to various areas such as accounting for corporations, long-term investments in securities, bonds, pension costs, leases, etc.

AG 311 COST ACCOUNTING 3c-0l-3sh
Prerequisite: AG301
Cost accounting methods and procedures including cost accumulation under job order cost system and process cost system, cost allocation, budgeting, and accounting for spoilage, joint and by-products. The planning and control aspect of cost accounting is emphasized.

AG 401 ADVANCED PRINCIPLES OF ACCOUNTING 3c-0l-3sh
Prerequisite: AG302
Study of accounting issues of specialized nature including partnerships, organization and liquidation, agency and branch accounting, accounting for business combinations, preparation of consolidated financial statements, accounting for government and not-for-profit entities, accounting for estates and trusts, and receivership accounting.

AG 412 ADVANCED COST ACCOUNTING 3c-0l-3sh
Prerequisite: AG311
Study of budgets, standard costs, direct and absorption costings, analysis of cost variances, and extensive analysis of various cost control and profit planning programs.

AG 421 FEDERAL TAXES 3c-0l-3sh
Prerequisite: AG202
Acquaints the student with Federal Income Tax Laws as they apply to individual taxpayers and partnerships.

AG 422 FEDERAL TAXATION OF CORPORATIONS, PARTNERSHIPS, ESTATES AND TRUSTS 3c-01-3 sh
Prerequisites: AG421 and AG302
Advanced course in federal income taxation as it applies to taxpayers other than individuals. Covers the tax treatment of those property transfers subject to federal and state gift and death taxes. The tax planning aspect of the various course topics as well as tax research methodology are also discussed.

AG 431 AUDITING 3c-0l-3 sh
Prerequisite: AG301
Study of auditing theory and practical application of auditing standards and procedures to the review, testing, and evaluation of accounting controls and to the verification of transactions and balances to express an opinion in an audit report on the fairness of financial statements' presentation.

AG 435 INTERNAL AUDITING 3c-0l-3sh
Prerequisite: AG431
This course covers four issues: foundations for internal auditing, administering internal auditing activities, operational areas, and special relationships and evaluation for internal auditing.

AG 441 ACCOUNTING FOR GOVERNMENT AND NONPROFIT ORGANIZATIONS 3c-01-3 sh
Prerequisite: AG302
Presents the views of authoritative professional organizations as to desirable standards of accounting and reporting for governmental and nonprofit entities. Topics include budgeting and budgetary accounts, accounting for various funds, the general fixed assets group of accounts, the financial reporting process, and application of the principles of fund accounting in specific areas.

AG 451 SEMINAR IN ACCOUNTING STANDARDS 3c-0l-3sh
Prerequisite: AG302
Study of professional standards having authoritative support in the field of accounting. APB opinions, FASB interpretations, and SEC Accounting Series Releases are discussed.

AG 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

AG 488 INTERNSHIP IN ACCOUNTING (INDUSTRIAL & GOVERNMENT) var-6 sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Practical experiences in an industrial or government accounting setting.

AG 493 INTERNSHIP IN ACCOUNTING (PUBLIC) var-6 sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Practical experience with a public accounting firm.

AH: ART HISTORY

Department of Art
College of Fine Arts

AH 101 INTRODUCTION TO ART 3c-0l-3sh
Designed to introduce the student to the significance of art as relayed to contemporary living and our historical heritage.

AH 115 ANCIENT TO MEDIEVAL ART 3c-0l-3sh
Study of art from prehistoric times to the Middle Ages. Man's artistic development is seen in relation to political, social, economic, and religious events.

AH 116 RENAISSANCE TO BAROQUE ART 3c-0l-3sh
Study of art from the Renaissance to the Baroque in light of the historical events which affect man's artistic impulses and development.

AH 211 MODERN ART 3c-0l-3sh
A survey of the revolutionary movements which began about 1850; concludes with trends in contemporary arts.

AH 219 HISTORICAL PAINTING TECHNIQUES 1c-3l-3sh
The art major is encouraged to experience a series of historical painting techniques that have been used by artists of the past. Experiences will include exploration in such painting media as fresco, egg tempera, and oil.

AH 222 ART IN AMERICA 3c-0l-3sh
Surveys American art and its relation to the development of American ideas and ideals.

AH 406 ANCIENT MIGRATORY ART 3c-0l-3sh
A survey of art from various ancient cultures which reflect contacts known and theoretic. Such cultures as the Celtic, Chinese, Indus Valley, Mesopotamian, African, Oceanic, American Indian, Pre-Columbian, and Egyptian are covered. Dual listed for graduate credit as AH506.

AH 407 MEDIEVAL ART 3c-0l-3sh
Art and architecture of Europe during the Middle Ages, beginning with early Christian and Byzantine and concluding with the Gothic period. Dual listed for graduate credit as AH507.

AH 408 ITALIAN RENAISSANCE ART 3c-0l-3sh
Italian art from 1400s through 1650 and Mannerist movement. Special attention paid to great masters of the period. Dual listed for graduate credit as AH508.

AH 409 BAROQUE AND ROCOCO ART 3c-0l-3sh
A general survey of art from 1575-1775, will include architecture, sculpture, painting, and other arts. Dual listed for graduate credit as AH509.

AH 412 CLASSICAL ART 3c-0l-3sh
Historical survey of the architecture, painting, sculpture, and minor arts of the classical period of Greece and Rome, including the Minoan, Mycenaean, and Etruscan cultures.

AH 413 SENIOR SEMINAR 3c-0l-3sh
Intended to help students develop adequate vocabularies and methods to be used in discussion and criticism of works of art.

AH 416 NORTHERN RENAISSANCE ART 3c-0l-3sh
Explores phenomena of art north of the Alps from 1400 to 1600, especially as it appears in the Lowlands, as well as side explorations into art of France, Germany, Austria, and the court at Prague.

AH 418 PRACTICUM IN SLIDE ROOM PROCEDURES 0c-2l-1sh
A practicum course devoted to the study of slide room practices and techniques: includes organization, cataloguing, filing, mounting, and labeling of slides.

AH 419 MUSEOLOGY var-1 to 6sh
The student will work in the University Museum under the supervision of the director. Museum techniques and practices in an "on- the-job" training situation will be stressed. Dual listed for graduate credit as AH519.

AH 424 ART OF THE EAST 3c-0l-3sh
The development of art in China, India, and Japan from its Neolithic origins to the traditions of later historical times. Dual listed for graduate credit as AH524.

AH 426 PRE-COLUMBIAN ART 3c-0l-3sh
A survey of artistic traditions of the Pacific Ocean, Pre-Columbian of Meso-America and South America, and North American cultures. Dual listed for graduate credit as AH526.

AM: APPLIED MUSIC

Department of Music
College of Fine Arts

Music majors and others who may qualify take private instruction in their respective major areas of performance in instrument or voice for up to eight semesters. Half-hour lessons are given each week (2 s.h.) for students enrolled in the B.S. and B.A. degree programs. A one-hour lesson (4 s.h.) is scheduled by students enrolled in the B.F.A. degree program only.

AM101, 151, 201, 251, 301, 351, 401, 451	Piano I -VIII
AM102, 152, 202, 252, 302, 352, 402, 452	Organ I -VIII
AM103, 153, 203, 253, 303, 353, 403, 453	Harpsichord I -VIII
AM104, 154, 204, 254, 304, 354, 404, 454	Harp I -VIII
AM105, 155, 205, 255, 305, 355, 405, 455	Voice I -VIII
AM106, 156, 206, 256, 306, 356, 406, 456	Violin I -VIII
AM107, 157, 207, 257, 307, 357, 407, 457	Viola I -VIII
AM108, 158, 208, 258, 308, 358, 408, 458	Cello I -VIII
AM109, 159, 209, 259, 309, 359, 409, 459	String Bass I -VIII
AM110, 160, 210, 260, 310, 360, 410, 460	Flute I -VIII
AM111, 161, 211, 261, 311, 361, 411, 461	Clarinet I -VIII
AM112, 162, 212, 262, 312, 362, 412, 462	Oboe I -VIII
AM113, 163, 213, 263, 313, 363, 413, 463	Bassoon I -VIII
AM114, 164, 214, 264, 314, 364, 414, 464	Saxophone I -VIII
AM115, 165, 215, 265, 315, 365, 415, 465	Trumpet I -VIII
AM116, 166, 216, 266, 316, 366, 416, 466	French Horn I -VIII
AM117, 167, 217, 267, 317, 367, 417, 467	Trombone I -VIII
AM118, 168, 218, 268, 318, 368, 418, 468	Baritone Horn I -VIII
AM119, 169, 219, 269, 319, 369, 419, 469	Tuba I -VIII
AM120, 170, 220, 270, 320, 370, 420, 470	Percussion I -VIII
AM121, 171, 221, 271, 321, 371, 421, 471	Guitar I -VIII

AN: ANTHROPOLOGY

Department of Sociology/Anthropology
College of Humanities and Social Sciences

AN 110 INTRODUCTION TO ANTHROPOLOGY 3c-0l-3sh
General consideration of cultural anthropology, physical anthropology, linguistics, and archaeology with particular attention to biological evolution, cultural evolution, and the nature and diversity of cultural systems.

AN 211 CULTURAL ANTHROPOLOGY 3c-0l-3sh
Explores the nature of culture as a human survival technique. Provides a framework for appreciation and understanding cultural differences and similarities in human societies, past and present.

AN 213 WORLD ARCHAEOLOGY 3c-0l-3sh
Survey of the prehistory of the world with emphasis on technology and cultural ecology. Focuses on representative sites in order to foster an appreciation of the past diversity of cultural systems.

AN 222 INTRODUCTION TO PHYSICAL ANTHROPOLOGY 3c-0l-3sh
Introduction to the goals and techniques of biological anthropology with emphasis in primatology, paleoanthropology, genetics, and osteology. Provides a basis for evaluating the role of biology in human behavior.

AN 233 CULTURAL SYMBOLISM: LANGUAGE IN CULTURE AND SOCIETY 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis given to problems in anthropology with respect to non-Western languages.

AN 244 BASIC ARCHAEOLOGY 3c-0l-3sh
Introduction to the goals and methods of anthropological archaeology with particular attention to the analysis of cultural chronology, past lifeways, and cultural process. Provides laboratory experience with artifacts and other archaeological data.

AN 312 WORLD ETHNOGRAPHY 3c-0l-3sh
Detailed study of specific pre-literate cultures. Emphasis given to questions of cultural integration.

AN 314 ETHNOLOGY OF NORTH AMERICAN INDIANS 3c-0l-3sh
Survey of culture history and culture area characteristics of the Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.

AN 315 NORTH AMERICAN ARCHAEOLOGY 3c-0l-3sh
Prerequisite: AN110 or AN244 or permission of the instructor Survey of North American prehistory with emphasis on cultural ecology and technology. Attention is given to all geograhic areas north of Mexico, but the focus is on the Eastern Woodlands.

AN 316 ANTHROPOLOGY OF RELIGION 3c-0l-3sh
Prerequisite: AN110 or AN211
Explores nature, function, and universal characteristics of religion in human society by utilizing cross-cultural approach. Theories concerning religious phenomena serve as topics for discussion.

AN 317 QUANTITATIVE AND INSTRUMENTAL ARCHAEOLOGY 3c-0l-3sh
Prerequisite: AN244 or permission of the instructor.
Introduction to theory and method in archaeological research through lecture, laboratory exercises, and individual projects. Provides students with actual experience analyzing and interpreting archaeological date sets.

AN 318 MUSEUM METHODS 3c-0l-3sh
Prerequisite: AN110 or 211 or 244
Lecture and laboratory course surveying role of museums as social and educational institutions, types of museums, museum administration, and museum architecture. Procedures for collection, curation, preservation, and storage of anthropological and natural history specimens examined.

AN 319 KINSHIP AND SOCIAL ORGANIZATION 3c-0l-3sh
Prerequisite: AN110 or AN211
Survey of mechanisms of integration in social organization and their role in the development of societies. Family, kinship, and ideological systems stressed.

AN 320 ARCHAEOLOGICAL FIELD SCHOOL var-6sh
Introduction to archaeological field excavation and to laboratory processing. Selected archaeological sites in Indiana and adjacent counties will be excavated by the field school. Offered summer only.

AN 321 METHODS OF CROSS-CULTURAL ANALYSIS 3c-0l-3sh
Prerequisite: AN110 or AN211
Comparative methods and techniques reviewed and evaluated in relation to the problems they were designed to solve. Statistics and computational equipment used in the analysis of data derived from the Ethnographic Atlas or the Human Relations Area Files.

AN 322 CULTURE AND PERSONALITY 3c-0l-3sh
Prerequisites: PC101, and AN110 or SO151
Examination of personality characteristics produced in a given cultural milieu or subgroup. Cross-cultural comparisons and analyses made with respect to child rearing, male-female role differentiation, bodily movements, suppression, mental disturbance, and religious expression.

AN 337 CHILDHOOD AND SOCIETY 3c-0l-3sh
Prerequisites: One of the following — SO151, AN110, PC101 or permission of the instructor
A cross-cultural comparison of child rearing concepts and practices with special attention to the United States both in the present and past. A study of the cultural milieu of children along with sequential adult behavior. Attention is given to divergent world views and role expectations of the child. The course content (involving student participation) is essentially analytical and descriptive rather than applied.

AN 371 CULTURAL AREA STUDIES 3c-0l-3sh
Prerequisite: AN110 or AN211
Analysis of prehistoric, historic, and contemporary aspects of ethnological studies in a culture area. Social organization, linguistic ties, cultural ecology, folklore, mythology, and artistic expressions of the peoples and their world view examined. Course may be repeated UNDER DIFFERENT LETTER DESIGNATIONS according to selection of culture areas by instructors responsible for the course.

THE FOLLOWING CULTURE AREAS ARE AVAILABLE:
AN 371A CULTURAL AREA STUDIES: JAPAN
AN 371B CULTURAL AREA STUDIES: CHINA
AN 371C CULTURAL AREA STUDIES: CARIBBEAN
AN 371D CULTURAL AREA STUDIES: NORTHERN EUROPE

AN 401 SOCIAL AND CULTURAL CHANGE 3c-0l-3sh
Prerequisite: AN110 or SO151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to "planned change" at the local or regional level.

AN 444 MEDICAL ANTHROPOLOGY 3c-0l-3sh
Prerequisites: 9 credits in anthropology or permission
Focuses on the study of human confrontation with disease and illness and on the adaptive arrangements made by various human groups for dealing with these dangers. Health and disease are viewed from a broad array of micro and macro perspectives, e.g., evolutionary, ecological, and psychosocial. Designed for nursing and social work students as well as social and biological sciences students.

AN 456 FIELD RESEARCH METHODS 3c-0l-3sh
Prerequisite: 9 credits in anthropology
Examination of methods and practice of sociology and anthropology in the areas of qualitative and quantitative methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

AN 480 ANTHROPOLOGY SEMINAR var-1-3sh
A seminar for advanced students devoted to an intensive analysis of specialized theoretical career issues.

AN 481 SPECIAL TOPICS IN ANTHROPOLOGY 3c-0l-3sh
Focuses on specialized topics in anthropology which are not included among regular course offerings.

AN 482 INDEPENDENT STUDY var-1-3sh
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. Some kind of semester project is ordinarily expected.

AN 483 READINGS IN ANTHROPOLOGY var-1-3sh
Directed readings on special topics in anthropology. Instructor guides selection of readings.

AN 493 INTERNSHIP IN ANTHROPOLOGY var-3-12sh
Prerequisite: Permission of the instructor
The course is designed to offer students practical experience in any of the specialized fields of anthropology (physical, social-cultural, archaeology, or linguistics). Each student develops objectives in consultation with a particular departmental faculty member who is supervising the internship. Detailed field notes and a major paper based on the experience are required.

AR: ART (STUDIO)

Department of Art
College of Fine Arts

AR 100 ARTS OF THE TWENTIETH CENTURY 1c-3l-3sh
Designed to expand student response to visual, aural, and kinetic art forms of this century with special emphasis on recent decades. The course includes lecture, studio, and field experiences.

AR 111 DRAWING 0c-6l-3sh
A foundation course in drawing, including a study of the structure of drawing and composition with a variety of media and subject matter.

AR 112 FUNDAMENTALS OF DRAWING AND DESIGN 0c-6l-3sh
A course which seeks to integrate basic principles and fundamentals of drawing and design.

AR 113 DESIGN 0c-6l-3sh
Basic elements and principles of design are studied. A course in design in three dimensions.

AR 120 PRINCIPLES OF DESIGN 0c-4l-2sh
Principles of design and color are studied and applied to a crafted object. Major emphasis on aesthetic quality inherent in designing with materials.

AR 211 PAINTING 0c-6l-3sh
An introductory course in painting in which a variety of materials, techniques, and approaches are explored.

AR 213 WOODWORKING: FUNCTION AND FORM 0c-6l-3sh
Involves the study of woodworking and furniture design as it relates to the individual designer-artist. Students will experience a formal background in both woodworking technique and the application of design.

AR 214 CERAMICS 0c-6l-3sh
A general introduction to the techniques and aesthetics of clay. The student will work both at the wheel and with hand building methods.

AR 215 SCULPTURE 0c-6l-3sh
Introductory course in sculpture with emphasis on study of form as well as visualizing in the third dimension.

AR 216 BASIC METALS 0c-6l-3sh
Introduction to metal work with emphasis upon creation of functional and nonfunctional art objects. Approached from the viewpoint of beginner learning basic processes of metal fabrication.

AR 217 PRINTMAKING 0c-6l-3sh
Introduction to basic techniques of production of fine prints including work in relief, intaglio, lithograph, and serigraph processes.

AR 218 GRAPHIC DESIGN 0c-6l-3sh
Students explore various techniques and their application to such commercial art projects as package design, trademark, and other design problems. Lettering is stressed, both instant type and hand lettering.

AR 219 FIBERS 0c-6l-3sh
Provides students with introductory working knowledge in design and execution of projects in non 4/harness loom weaving and related fabric areas. Other fiber techniques, including hand-made paper, available for students to explore as desired.

AR 321 ADVANCED DRAWING 0c-6l-3sh
Prerequisites: AR111 & 112
Designed to meet the needs of the student who has some background in the field. Problems of composition, two- and three-dimensional relationships, and surface are on an individual basis.

AR 451 ADVANCED WOODWORKING: FUNCTION AND FORM 0c-6l-3sh
Prerequisite: AR213
Offers advanced training and skills involving the study of contemporary furniture design and woodworking. Emphasis on a technical and aesthetic point of view.

AR 452 ADVANCED CERAMICS 0c-6l-3sh
Prerequisite: AR214
Continued exploration of the field of ceramic production, along with kiln firing and glaze formulation.

AR 453 ADVANCED SCULPTURE 0c-6l-3sh
Prerequisite: AR215
Gives the student an opportunity to pursue independent study in sculpture. Materials and processes will be individually chosen and the work related to broadening concepts.

AR 454 ADVANCED PAINTING 0c-6l-3sh
Prerequisite: AR211
Individual experimentation and exploration by the painter and investigation of the various technical approaches.

AR 455 ADVANCED GRAPHIC DESIGN 0c-6l-3sh
Prerequisite: AR218
Stresses advanced techniques in layout and illustration. The student explores ideas, such as creation of trademarks and how products are designed. Layouts are analyzed as to their quality. Package design is studied.

AR 457 ADVANCED PRINTMAKING 0c-6l-3sh
Prerequisite: AR217
Student elects to study one of the printmaking processes in greater depth and works toward development of own techniques, working processes, and ideas.

AR 459 ADVANCED FIBERS 0c-6l-3sh
Prerequisite: AR219
Provides student with a working knowledge in design and execution of projects in weaving and related areas. Other fiber techniques, including handmade paper, will be available for the students to explore as desired.

AR 460 ADVANCED METALS 0c-6l-3sh
Prerequisite: AR216
Design and processes associated with art of metal are given greater concentration. The developing artist is encouraged to investigate, in depth, one or more of the metal arts as an extension of the basic course.

AR 481 SPECIAL TOPICS var-1-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter may change with repeated offering of the course. May be repeated for credit.

AR 482 INDEPENDENT STUDY var-1-12sh
An opportunity to pursue special interests beyond the scope of regular class offerings. Permission of the instructor and approval of the department chairperson are required.

AR 493 INTERNSHIP var-3-12sh
Designed for art majors who wish to receive practical experience working within professional situations which relate to the student's artistic and occupational goals.

AT: ART EDUCATION

Department of Art
College of Fine Arts

AT 315 SEMINAR IN ART EDUCATION 3c-0l-3sh
A seminar to introduce the art education major to the principles and practices of teaching visual arts K through 12. Field experiences, pre-student teaching activities, introduction to literative art teacher to identify with problems of students. (Prerequisite to student teaching.) Spring only.

AT 316 ART EDUCATION MATERIALS AND PRACTICUM 1c-3l-3sh
An art education studio which will be an investigation and exploration of typical art materials, including sources and resources of supplies, equipment, resource personnel, and visual media for a full range of multimedia and visual experiences. The studio endeavors will be followed by a practicum utilizing the above sources in teaching situations with children, youth, and adults. (Prerequisite to student teaching). Fall only.

AT 317 ART EDUCATION METHODOLOGY AT THE ELEMENTARY LEVEL 1c-3l-3sh
Examines children's artistic development, art programs, planning, motivation, and evaluation. Weekly teaching experience is an integral part of the course. (Prerequisite to student teaching.) Fall only.

AT 318 ART EDUCATION METHODOLOGY AT THE SECONDARY LEVEL 1c-3l-3sh
Relationship of art education to the total secondary curriculum is studied to determine goals of junior-senior high school art. The adolescent creative products are analyzed to help the prospective art teacher to identify with problems of students. (Prerequisite to student teaching.) Spring only.

AT 330 ART FOR THE MENTALLY AND PHYSICALLY HANDICAPPED 1c-3l-3sh
The materials and processes of arts and crafts are studied for opportunities they offer in the training, therapy, and education of the mentally deficient, physically impaired, emotionally disturbed, and multiple impaired child or adult.

BE: BUSINESS EDUCATION
Department of Administrative Services and Business Education
College of Business

BE 111 FOUNDATIONS OF BUSINESS MATHEMATICS 3c-0l-3sh
Develops an understanding of numbers and knowledge of fundamental concepts in arithmetic and algebra in the solution of common and advanced problems encountered in business by the businessman and consumer. Topics illustrating and emphasizing the application of business mathematics include methods used to compute interest discount, partial payments, discounting of notes and drafts, depreciation, amortization, sinking fund redemptions, effective rate of interest, and preparation of statistical data.

BE 131 PRINCIPLES OF TYPEWRITING 3c-0l-2sh
Emphasis on development of correct techniques in typewriting, introduction to basic styles of business letters, simple tabulations, and simple manuscripts; specific standards of speed and accuracy are required.

BE 132 INTERMEDIATE TYPEWRITING 3c-0l-3sh
Prerequisite: 2.0 GPA in BE131 or credit by examination
Emphasis on further development of speed, accuracy, and production ability; includes business letters with special features, business reports, business forms, rough drafts, manuscripts.

BE 134 KEYBOARDING 1c-0l-1sh
A class designed to provide students with the fundamental skills to keyboard information quickly and accurately, in fourteen one-hour sessions. It is intended for the student who does not require the additional skills included in Principles of Typewriting, such as letter formats, manuscript typing, and tabulation. Recommended for students in computer science, journalism, management information systems, etc.

BE 250 ELECTRONIC OFFICE PROCEDURES 3c-0l-3sh
Prerequisite: BE131
A study of the theory and practice of the systems in an electronic office: records management, office environment, communication transmittal systems, reprographics, and office procedures.

BE 261 SHORTHAND THEORY 3c-0l-3sh
An introductory course in the basic principles of Gregg Shorthand, SERIES 90. Credit may be given by examination.

BE 262 SHORTHAND DICTATION 3c-0l-3sh
Prerequisite: BE261
Major objectives are to review and strengthen the student's knowledge of principles of Gregg Shorthand, SERIES-90, to build shorthand-writing speed and to build transcription skills. Credit may be given by examination.

BE 264 OFFICE PROCEDURES 3c-0l-3sh
Prerequisite: BE132
Advanced study of theory and practice in activities common to office records management; handling of mail; bank, telephone, and telegraph services; receiving callers; writing reports; dictating and transcription equipment; bank, financial, and legal transactions; shipping and receiving services; reference books; etc.

BE 273 WORD PROCESSING APPLICATIONS 3c-0l-3sh
Prerequisite: BE132
In this course students will develop a high degree of proficiency in the use of word processors. Emphasis is on machine operations and production skills in formatting, text editing, and understanding word processing concepts.

BE 274 INFORMATION PROCESSING APPLICATIONS 3c-0l-3sh
Prerequisite: BE132
A software microcomputer applications course using programs designed for the electronic office—word processing, spreadsheets, database management, and graphics.

BE 311 METHODS AND EVALUATION IN BUSINESS EDUCATION I 3c-0l-3sh
Prerequisites: General Psychology, Educational Psychology, and completion of the freshman and sophomore courses in the student's major areas.
Includes general methods of teaching and evaluation plus special methods and evaluation in basic business courses. Unit plans, lesson plans, and unit tests are emphasized. Aims, techniques, and procedures of teaching, grade placement of courses, and classroom management are studied.

BE 312 METHODS AND EVALUATION IN BUSINESS EDUCATION II var-1 to 3sh
Prerequisite: BE311 or DE410
Covers three sections of special methods and evaluation in typewriting, stenography, and accounting data processing. Objectives, planning, evaluating, and skill building are studied. Media and facilities for instruction are examined. Students elect sections needed for certification.

BE 335 MACHINE MATHEMATICS 3c-0l-3sh
Prerequisite: BE111 or permission of instructor
Fundamental mathematical processes utilized in business are applied in realistic business situations through the use of office machines, including electronic calculators and transcribing machines.

BE 363 TRANSCRIPTION 3c-0l-3sh
Prerequisite: BE262
Develops additional speed in taking dictation, with emphasis on development of transcription skills. Credit may be given by examination.

BE 433 SUPERVISED WORK EXPERIENCE AND SEMINAR IN OFFICE OCCUPATIONS var-6sh
Students gain experience in selected office occupations. This cooperative business experience is conducted by competent business and university personnel. There is a weekly evening seminar.

BE 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

BI: BIOLOGY

Department of Biology
College of Natural Sciences and Mathematics

BI 103 GENERAL BIOLOGY I 3c-2l-4sh
Prerequisite: Non-Biology majors only
Introduces biological components of some of man's major problems, including energy storage and release, molecular transport, chemical control, genetics, and ecology.

BI 104 GENERAL BIOLOGY II 3c-2l-4sh
Prerequisites: BI103, Non-Biology majors only
Completion of background information with study of selected areas of Biology, such as evolution, behavior, and developmental biology.

BI 105 CELL BIOLOGY 3c-2l-4sh
Introductory course to increase depth of beginning student's understanding of structural and functional development plus evolutionary aspects of cell concept.

BI 110 PLANT BIOLOGY 3c-4l-5sh
Prerequisite: BI105 or special permission
Plant structure, function development, recognition and grouping, environmental relationships, and economic importance of plants considered.

BI 120 ANIMAL BIOLOGY 3c-4l-5sh
Prerequisite: BI105 or special permission
Morphology, physiology, embryology, ecology, taxonomy, social and economic importance of animals; consideration of principles applicable to a correlation of classical with present-day zoology.

BI 150 HUMAN ANATOMY 2c-3l-3sh
Prerequisite: Non-Biology majors only
Study of the functional systematic anatomy of the human. Lab studies center on nonhuman mammals whose anatomy is then related to the human condition.

BI 151 HUMAN PHYSIOLOGY 3c-2l-4sh
Prerequisites: BI105, Non-Biology majors only
Course deals with acquiring, through lecture presentations and laboratory experiments, an understanding of the basic functions and control of the major organ systems of the human body. Organ systems examined include the following: muscular system, cardiovascular system, respiratory system, endocrine system, renal system, digestive system, reproductive system, and nervous system.

BI 153 HUMAN REPRODUCTIVE BIOLOGY 3c-0l-3sh
Prerequisites: Non-Biology majors only
Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

BI 155 HUMAN PHYSIOLOGY AND ANATOMY 3c-3l-4sh
Prerequisite: Non-Biology majors only (food and nutrition, home economics education, physical education, and safety sciences majors)
Study of structure and function of the human body. Emphasis is on normal function, with particular attention to functional anatomy, control mechanisms, and interrelationships among systems. Laboratory studies will include experimentation and dissection. For students with little or no science background.

BI 232 FUNDAMENTALS OF MICROBIOLOGY 2c-3l-3sh
Prerequisites: CH101 or equivalent, Non-Biology majors only (food and nutrition, and home economics education majors)
Study of microorganisms and the role they play in water, food disease, and infection. Food spoilage, poisoning, and disease are emphasized. General methods and techniques are emphasized in the laboratory.

BI 241 GENERAL MICROBIOLOGY 2c-3l-3sh
Prerequisite: Non-Biology majors only (nursing and respiratory therapy majors), BI105, CH101, or equivalent
Study of microorganisms and the role they play in water, soil, food, and infection. Microbes and disease will be emphasized. Standard methods and techniques are emphasized in laboratory.

BI 252 FIELD ZOOLOGY 2c-3l-3sh
Prerequisite: BI120
Field natural history of vertebrates; identification, collection, and preservation techniques.

BI 261 ORNITHOLOGY 2c-3l-3sh
Prerequisites: BI105 or BI103 and 104
A study of birds of the region. Indoor laboratory as well as early morning and possibly weekend field trips required.

BI 262 GENERAL ENTOMOLOGY 2c-3l-3sh
Prerequisite: BI120
Morphology, anatomy, ecology, taxonomy, economic, and public health importance of insect orders, particularly those of Western Pennsylvania; student collection and field trips required.

BI 263 GENETICS 2c-3l-3sh
Prerequisites: BI110 or 120 and CH231.
Deals with the distribution and function of the hereditary material; special emphasis on microbial, viral, and molecular genetics.

BI 265 HUMAN GENETICS 3c-0l-3sh
Prerequisite: Non-Biology majors only
Behavior of genes in man, as individuals and as populations, will be considered through pedigree studies, linkage analysis, chemical structure of proteins, and cytogenetic correlations. Emphasis on facts and principles which relate to man's growing social, ethical, and political problems.

BI 269 BIOETHICS AND COEVOLUTION 3c-0l-3sh
Discussion and exploration of the coevolution of man and nature. Areas covered include the concepts of coevolution, bioethics, resource utilization, and possible future lifestyles. Designed for majors and nonmajors.

BI 271 EVOLUTION 3c-0l-3sh
Prerequisite: One year biology.
Historical development of evolutionary thought evidence and operational mechanisms involved; origin and phylogenetic relationships of biological groups.

BI 272 CONSERVATION OF PLANT AND ANIMAL RESOURCES 2c-3l-3sh
Prerequisites: BI105 or BI103 and 104.
A study of accepted practices in soil, water, forest, and wildlife conservation. Saturday field trips.

BI 273 INTRODUCTION TO ROCKY MOUNTAIN ECOLOGY var-4sh
An introductory course intended primarily for those not familiar with the Rocky Mountains. Flora and fauna of each of the life zones will be described, collected, and identified. Interactions among the various elements of these ecosystems will be considered. This course will be given in a wilderness area. Primitive accommodations allow the student the opportunity to enjoy the wilderness area as much as possible. Study takes place in Wyoming. Tents, food, horses, etc. are provided by a professional outfitter. Offered only in the summer. No prerequisites.

BI 310 APPLIED ENTOMOLOGY AND ZOONOSES 2c-3l-3sh
Prerequisite: BI120 or Permission
Study of the measures for abatement or control of arthropods, rodents, birds, and other disease vectors of public importance; selection, chemistry, formulation, and safe application of insecticides, rodenticides, and fumigants; pesticiding equipment; application of biological and other measures of control.

BI 311 ENVIRONMENTAL BIOLOGY 3c-3l-4sh
Prerequisites: Restricted to Elementary Education and Earth Science; Education majors only.
Laboratory and field course providing basic knowledge in biology and its practical implications. Physical and biological aspects of the environment are studied.

BI 321 ENVIRONMENTAL PROTECTION I 2c-3l-3sh
Prerequisites: BI105, CH112, and permission of instructor, Environmental health majors only.
Considers the impact of important components of the physical environment on health and deals with principles and methods for identification, evaluation, and control of such health hazards. Major attention to principles and methods of epidemiological investigation.
Major credit only for environmental health majors.

BI 322 ENVIRONMENTAL PROTECTION II 2c-3l-3sh
Prerequisites: BI321, Environmental health majors only
Subjects receiving attention include water and food supplies, domestic and industrial sewage and wastes, housing, accidents, community air pollution, domestic and industrial poisons, ionizing radiations, occupational health hazards. Major credit only for environmental health majors.

BI 331 ANIMAL DEVELOPMENTAL BIOLOGY 2c-3l-3sh
Prerequisite: BI120
Comparative and molecular development of vertebrate animals are the major considerations. General principles of development are illustrated using vertebrate, invertebrate, and plant materials.

BI 350 CELLULAR PHYSIOLOGY 2c-3l-3sh
Prerequisite: CH231
Topics include cell membrane systems, bioenergetics, information processing systems as well as growth and differentiation of cells and their organelles. Complements plant and animal physiology and biochemistry.

BI 352 COMPARATIVE ANIMAL PHYSIOLOGY 2c-3l-3sh
Prerequisites: BI120, CH231
Comparative study of homeostatic mechanisms and systems in animals and their relation to fundamental chemical and physical events in cells.

BI 360 MEDICAL MYCOLOGY 2c-3l-3sh
Prerequisite: BI105
A study of the mycology of pathogenic fungi. Consideration will include sources of infection, distribution, symptomatology, diagnosis, prognosis, immunology, and treatment. Pathogens are used in the course, and emphasis is placed upon actual laboratory technique and procedures.

BI 361 MICROBIOLOGY 2c-3l-3sh
Prerequisites: BI105, CH231
Introduction to morphology, physiology, and ecology of procaryotic organisms. Importance of microorganisms in basic and applied research, economics, infection, and immunology are discussed.

BI 362 ECOLOGY 2c-3l-3sh
Prerequisites: BI110, 120.
Study of interrelations and adaptations of organisms; includes consideration of physical and biotic environmental factors. Field trips.

BI 364 IMMUNOLOGY 2c-3l-3sh
Prerequisites: BI361, CH351
Physical and chemical properties of antigens and antibodies; nature of antigen-antibody interactions; mechanism of antibody formation; and immune reaction and disease. Lab employs serological techniques.

BI 372 PLANT ANATOMY 2c-3l-3sh
Prerequisite: BI110
Embryological development and growth and maturation of typical vascular plants; emphasis placed on differentiation and maturation of plant organs of various families.

BI 401 LABORATORY METHODS IN BIOLOGY AND BIOTECHNOLOGY 2c-4l-3sh
Prerequisite: CH351
Theory and practice in a number of major analytical and preparative techniques currently in use in physiology, molecular biology, and biotechnology.

BI 425 HERPETOLOGY 2c-3l-3sh
Prerequisite: BI120
A comprehensive survey of the classes Amphibia and Reptilia, including their classification, structure, origin, evolution, phylogenetic relationships, distribution, and natural history. Special emphasis is placed on the herpetofauna of Pennsylvania.

BI 432 COMPARATIVE VERTEBRATE ANATOMY 2c-3l-3sh
Prerequisite: BI120
Discussion of anatomy of representative vertebrates from a comparative point of view. Stresses major organizational changes observed in vertebrate history.

BI 446 DENDROLOGY 2c-3l-3sh
Prerequisite: BI110 or by permission
Study of woody plants as to their identification, distribution, ecology, culture, anatomy, physiology, mensuration, and utilization.

BI 451 TAXONOMY OF PLANTS 2c-3l-3sh
Prerequisite: BI110
Considers the collection, preservation, and identification and taxonomy of plants of this region.

BI 453 PLANT PHYSIOLOGY 2c-3l-3sh
Prerequisites: BI110, CH231
Studies physiological processes occurring in plants considered in relation to growth, development, and ecology of plants.

BI 463 LIMNOLOGY 2c-3l-3sh
Prerequisites: BI362
An investigation into the physical, chemical, and biological aspects of inland waters and their interrelationships. In the laboratory the student will gain experience in the techniques involved in aquatic sampling and the analysis of data.
(Saturday or Sunday labs may be required.)

BI 472 RADIATION BIOLOGY 2c-3l-3sh
Prerequisites: Two years Biology, one year Physics, and General, Organic, and Biochemistry.
Aspects of nuclear physics and radioactive isotopes; uses, effects, detection, and measurement of radioactive nuclides used in Biology.

BI 475 MAMMALOGY 2c-3l-3sh
Prerequisite: BI120
A general discussion of mammals emphasizing systematics, distribution, and structural and functional modifications related to evolution of this group. Lab work samples numerous techniques that can be applied to mammalian biology.

BI 476 PARASITOLOGY 2c-3l-3sh
Prerequisite: BI120
Structure, physiology, ecology, life cycles, pathology, and treatment of parasitic protozoa, and flatworm and roundworm species of man. Dissection of hosts for parasites.

BI 478 MYCOLOGY 2c-3l-3sh
Prerequisite: BI110
Involves a study of the systemics, morphology, and physiology of the kingdom Myceteae with emphasis on economically important and experimentally useful organisms.

BI 480 BIOLOGY SEMINAR 1c-0l-1sh
Discussion of recent trends in biological thought and research. Students report on assigned readings and/or personal research.

BI 481 SPECIAL TOPICS var-1-3sh
This course varies from semester to semester covering diverse topics in specific areas of biology.

BI 482 INDEPENDENT STUDY var-1-3sh
Student investigates independently any field of biology in which interested. Work is supervised by a faculty member but does not involve regular class or laboratory hours. Enrollment by permission only; 2.5 GPA overall and in major courses required.

BI 493 BIOLOGY INTERNSHIP var-6-12sh
Prerequisites: Biology major with at least 57 semester hours, 2.5 overall QPA, AND permission of the director of internships and the chairperson. Selected students have opportunity, under department supervision, to gain off-campus practical experience in area of interest. Only six credits may be applied toward major; total number of credits will be decided in consultation between student, his/her adviser, and director of internships.

CE: COUNSELOR EDUCATION

Department of Counselor Education
College of Education

CE 250 DEVELOPING INTERPERSONAL RELATIONSHIP SKILLS 1c-0l-1sh
Teaches interpersonal relationship skills: listening, communicating, group dynamics, decision making, leadership, assertiveness, time use management, problem solving, and conflict resolution. Open to all undergraduates.

CE 253 COUNSELING IN SCHOOL SETTINGS 3c-0l-3sh
An elective course designed to provide in-service teachers and school personnel, other than counselors, with a basic understanding of the knowledge, information, and skills appropriate to counseling with individuals and groups.

CE 255 INDIVIDUAL AND SMALL GROUP PLANNING AND DECISION MAKING 3c-01-3sh
A cognitive and experiential exposure to decision making through the utilization of games, simulation, role playing, and related activities. A variety of decision-making models will be developed.

CE 400 GUIDANCE IN SCHOOL SETTINGS 3c-0l-3sh
A survey course in guidance designed as an elective for upper level undergraduate students in education and as an introductory course for in-service personnel.

CH: CHEMISTRY

Department of Chemistry
College of Natural Sciences and Mathematics

CH 101 COLLEGE CHEMISTRY I — each 3c-2l-4sh
The basic fundamental principles and concepts of inorganic chemistry are developed from the standpoint of atomic and molecular structure with illustrative examples from descriptive chemistry. The laboratory portion of the course illustrates physical and chemical properties in a qualitative and quantitative manner. The course is designed for selected majors within the College of Human Ecology and Health Sciences.

CH 102 COLLEGE CHEMISTRY II — 3c-2l-4sh
Prerequisite: CH101
The basic fundamental principles and concepts of organic and biochemistry are developed. Deals primarily with structural features of organic compounds, the chemistry of functional groups, and practical examples and uses of organic compounds. The laboratory portion illustrates properties and reactions of representative organic compounds. The course is designed for selected majors within the College of Human Ecology and Health Sciences.

CH 103 PRINCIPLES OF CHEMISTRY — 3c-2l-4sh
One-semester course to survey areas of inorganic, organic, and biochemistry. Open only to Physical Education majors.

CH 111 GENERAL CHEMISTRY I — 3c-3l-4sh
Lecture-discussion of principles of chemistry, including theory and applications. The lab illustrates principles discussed. Topics discussed include scientific measurements, simple definitions and concepts, the mole, stoichiometry, gas laws, electronic structure of the atom, bonding, thermochemistry, and descriptive chemistry of the elements.

CH 112 GENERAL CHEMISTRY II — 3c-3l-4sh
Prerequisite: CH111
Continuation of General Chemistry I. Topics discussed include the solid and liquid state, solutions, kinetics, equilibria, acids and bases, solubility equilibria, thermodynamics, electrochemistry, and descriptive chemistry of the elements.

CH 113 CONCEPTS IN CHEMISTRY I — 3c-3l-4sh
Introductory course for chemistry majors. Topics covered include atomic theory, chemical bonding, molecular geometry, kinetic-molecular theory of gases, gas laws, thermochemistry, and descriptive chemistry of selected elements.

CH 114 CONCEPTS IN CHEMISTRY II — 3c-3l-4sh
Prerequisite: CH113
Continuation of Concepts in Chemistry I. Topics covered include the liquid and solid states, solution theory, chemical equilibrium, kinetics, electrochemistry, nuclear chemistry, and descriptive chemistry of selected elements.

CH 231 ORGANIC CHEMISTRY I — 3c-4l-4sh
Prerequisite: CH112 or 114
A study of compounds of carbon, with special emphasis on structure - reactivity relationships. Laboratory work emphasizes methods of separation and purification of organic compounds.

CH 232 ORGANIC CHEMISTRY II — 3c-4l-4sh
A continuation of Organic Chemistry I with an introduction to spectroscopic techniques. Laboratory work emphasizes the synthesis of representative compounds.

CH 301 CHEMISTRY SEMINAR 1c-0l-1sh
Discussion of current technical literature and current research problems of staff. Lectures by outside chemists and student presentations. Open to junior or senior chemistry majors and to others by permission of the instructor.

CH 302 INDUSTRIAL CHEMISTRY 2c-3l-3sh
Prerequisite: CH232
Study of application of chemistry and science to industries of Western Pennsylvania for the science teacher. Consists of lectures, laboratory work, and field trips to representative industries.

CH 303 GLASSBLOWING TECHNIQUES 0c-2l-1sh
Introduces science student to techniques necessary for construction and modification of scientific glass apparatus. Limited to junior and senior science majors and others by permission of instructor.

CH 305 NEW APPROACHES TO TEACHING HIGH SCHOOL CHEMISTRY 4c-var-3sh
Prerequisite: at least junior Chemistry Education major.
Survey of current approaches in teaching high school chemistry. Modified versions of Chem Study Approach and Chemical Bond Approach investigated; individualization of chemistry and application of various teaching materials and techniques used in individualizing chemistry surveyed. Environmental chemistry and development of relevant topics in chemistry used to better understand chemical basis of our current environmental problems.

CH 321 QUANTITATIVE ANALYSIS 3c-4l-4sh
Prerequisite: CH112 or CH114
Theory and practice of quantitative analysis, including gravimetric and volumetric analysis; special emphasis on perfecting student's laboratory techniques and application of general chemical knowledge through problem solving.

CH 322 INSTRUMENTAL ANALYSIS 3c-4l-4sh
Prerequisite: CH321
Modern instrumental methods of chemical analysis. Student learns theory behind the instrument, principles of operation, interpretation of data obtained, and limitations of methods.

CH 323 ANALYTICAL METHODS 3c-4l-4sh
Prerequisites: CH112 and non-Chemistry major
Principles of precipitation, acid-base, oxidation-reduction, and equilibria are applied to problem solving and to laboratory determinations; instrumental methods of analysis, such as colorimetry, atomic absorption and flame emission, gas chromatography, etc.

CH 324 FORENSIC ANALYSIS 3c-4l-4sh
Prerequisites: CH111, 112, 231, 232
Theory and practice of modern quantitative and instrumental analysis, especially as applied to forensic samples in the crime Lab. Principles of instrument operation and data interpretation will be stressed.

CH 331 ORGANIC MOLECULAR STRUCTURE DETERMINATION 4c-var-3sh
Prerequisites: CH231-232 (CH232 may be taken concurrently)
Gives the student experience in systematic identification of various classes of organic compounds by both chemical and physical methods.

CH 335 ADVANCED ORGANIC CHEMISTRY 3c-0l-3sh
Prerequisites: CH232 and CH341
Selected topics of current interest covered. Possible topics include reaction mechanisms, molecular spectroscopy, stereochemistry, natural products, heterocyclics, polymer chemistry, and organic synthesis.

CH 341 PHYSICAL CHEMISTRY I 4c-0l-4sh
Prerequisites: MA122, 124 or 128 and PY112 or 132, CH112 or 114
Chemical thermodynamics with applications to solutions, phase and chemical equilibria-kinetic theory.

CH 342 PHYSICAL CHEMISTRY II 3c-0l-3sh
Prerequisite: CH341
Study of solids, liquids, surfaces, chemical kinetics, electrochemistry, atomic and molecular structure.

CH 343 PHYSICAL CHEMISTRY LABORATORY I 0c-3l-1sh
Prerequisites: CH321, 341
Experiments illustrating application of fundamental laws to actual systems.

CH 344 PHYSICAL CHEMISTRY LABORATORY II 0c-3l-1sh
Prerequisites: CH342, 343
Extension of Physical Chemistry Laboratory I; experiments related to chemical kinetics, molecular spectroscopy, and other topics of physical chemistry.

CH 351 BIOCHEMISTRY 4c-0l-4sh
Prerequisite: CH231
Study of chemistry and biological functions of carbohydrates, lipids, proteins, minerals, vitamins, and hormones.

CH 355 BIOCHEMISTRY AND NUTRITION 3c-0l-3sh
Prerequisite: CH102
Course for Home Economics major; studies chemistry and biological function of biologically active compounds with respect to nutritional requirements.

CH 376 RADIOCHEMISTRY 4c-var-3sh
Prerequisite: CH322
Study of basic aspects of nuclear structure, phenomena of radioactive isotopes, and chemical effects of such isotopes. Concurrent lab work utilizing instruments for detection and measurement of radioactive nuclides used in chemical experimentation.

CH 411 INORGANIC CHEMISTRY 3c-0l-3sh
Prerequisite: CH341
Gives understanding of advanced theories of atomic structure, chemical bonding, acids and bases, coordination compounds, and selected topics.

CH 412 INORGANIC PREPARATIONS 4c-var-3sh
Prerequisites: CH321 and CH411
Lectures include discussion of descriptive chemistry of elements according to their periodicity; laboratory includes investigation of synthesis; purification and characterization of inorganic substances.

CH 421 ADVANCED INSTRUMENTAL ANALYSIS 4c-var-3sh
Prerequisite: CH322
Study of modern chemical analysis, using advanced instrumental techniques; emphasis on theory, principles of operation, capabilities, and limitations of advanced analytical instruments used.

CH 441 ADVANCED PHYSICAL CHEMISTRY 3c-0l-3sh
Prerequisite or Co-requisite: CH342
Study of fundamental ideas of quantum and statistical mechanics, molecular structure, and other topics of current interest.

CH 493 INTERNSHIP IN CHEMISTRY var-4 to 9sh
Prerequisites: CH113, 114, 231, 232, 321, 341 and departmental approval
Full-time involvement in an actual "on-the-job" situation in an industrial laboratory under the tutelage of a selected preceptor. A department faculty member will work closely with the student and preceptor and will assume responsibility of making the final evaluation and assigning a grade.

CH 498 PROBLEMS IN CHEMISTRY var-1 to 2sh
Prerequisite: Permission of chairperson
Course of independent study on selected problems, including lab work, library reading, and conferences with staff member. A minimum of 4 hours per week required per credit.

CI: CHINESE

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

CI 151 CONTEMPORARY CHINESE I
The first part of comprehensive courses for beginning learners with emphasis on the training of both the understanding of the language and oral ability, while not neglecting the general knowledge of the Chinese language and culture. The student will practice hearing and understanding the Chinese sound system with four tones and grammar, and will perfect his pronunciation and sentence structure through classroom practice and tapings, discussions, and homework. The course is taught in Chinese.

CI 152 CONTEMPORARY CHINESE II 3C-0l-3sh
Prerequisite: CI151
A continuing course for beginning learners with emphasis on the training of both the understanding of the language and oral ability, while not neglecting the general knowledge of the Chinese language and culture. The student will practice hearing and understanding the Chinese sound system with four tones and grammar, and will perfect his pronunciation and sentence structure through classroom practice and tapings, discussions, and homework. The course is taught in Chinese.

CI 251 CONTEMPORARY CHINESE III 3C-0l-3sh
Prerequisite: CI152
A comprehensive course for intermediate level learners with emphasis on the training of both the understanding of the language and oral ability, while not neglecting the general knowledge of the Chinese language and culture. The student will advance in understanding the Chinese language, and will continue to work with pronunciation and sentence structure through classroom practice and tapings, discussions, and homework. The course is taught in Chinese.

CI 252 CONTEMPORARY CHINESE IV 3C-0l-3sh
Prerequisite: CI251
A comprehensive course for continuing learners with emphasis on the training of both the understanding of the language and oral ability, while not neglecting the general knowledge of the Chinese language and culture. The student will advance in understanding the Chinese language, and will continue to work with pronunciation and sentence structure through classroom practice and tapings, discussions, and homework. The course is taught in Chinese.

CM: COMMUNICATIONS MEDIA

Department of Communications Media
College of Education

CM 101 SURVEY OF COMMUNICATIONS MEDIA 3c-0l-3sh
Required of Communications Media majors
Introduction to the evolution, status, and future of communications media. Students explore intrapersonal communication through self-assessment, values clarification, and feedback; interpersonal communication through interviews, observations, case studies, and gaming; and mass communications through the examination of the processes and the technology utilized to disseminate and manage information. Career paths, field applications, professional associations, and the primary literature are investigated.

CM 102 BASIC TECHNOLOGY 1c-0l-1sh
Prerequisite: CM101
Provides Communication majors with the ability to identify, operate, and maintain a variety of audiovisual hardware commonly found in education, business, industry, and allied health professions.

CM 103 BASIC COMMUNICATIONS RESEARCH 1c-0l-1sh
Prerequisite: CM101
An introduction to research as it specifically applies to the field of communications. Major emphasis will be placed on a review of the resource materials pertaining to the area of communications. Also to be included will be a basic understanding of research methodology, as it relates to the design and validation of communication devices.

CM 200 IMAGES 3c-0l-3sh
Prerequisite: CM101
The course examines the basic visual and aural elements, the strategies and options of techniques, the psychological and physiological implications of creative composition, and the range of media and formats.

CM 271 BEGINNING PHOTOGRAPHY 3c-0l-3sh
Prerequisite: CM101 or permission
Working with black-and-white materials, the student learns to operate a camera, develop film, make contact prints and enlargements, and mount prints for display. Ancillary topics are introduced such as filtration, print spotting, flash, and the use of accessory lenses. Student is required to have a 35mm camera, preferably a single-lens reflex, with fully manual focusing and exposure capability.

CM 301 INSTRUCTIONAL MEDIA 3c-0l-3sh
Prerequisites: PC101, EP302, and Junior Standing Professional course required of all students in Education.
Preservice teachers gain competencies in selecting, using, and evaluating audiovisual machines and materials. Performance-based activities in instructional design, materials production, machines operation, and related learning resource activities relevant to prospective teaching experiences stressed.

CM 303 SCRIPTWRITING 3c-0l-3sh
Prerequisite: CM101
Required of Communications Media majors
Introduction to the design of media materials and script writing. Style and techniques of writing will be analyzed. Classroom emphasis is on writing, critiques, and revision of designs and scripts. Scripts for audio still projection and motion picture and television productions will be written.

CM 330 COMMUNICATIONS MEDIA IN TRAINING AND EDUCATION 3c-0l-3sh
Prerequisites: CM101, 303
The course reviews the historical growth and philosophies of the design and development of training and education products and processes. The student examines the principal roles and functions of human and material resource professionals for training (performance improvement), education (competency improvement), and development (personal and organizational growth).

CM 335 CONSULTING PRACTICES IN COMMUNICATIONS 3c-0l-3sh
Prerequisite: CM101
The course presents the theoretical views and clinical applications of consulting skills and practices associated and needed by communication professionals. Presented will be the functions and role of the consultant, the client's perspective of consulting, hiring a consultant, ethics in consulting, personal assessment tests, and related literature and models.

CM 390 PRACTICUM IN COMMUNICATIONS var-1-3sh
Prerequisite: CM101, Written Permission
An opportunity with credit for students to make contributions to department and campus media-related facilities and offices including WIUP-TV, WIUP-FM, Penn, Oak, Media Relations, Media Resources. Repeatable for a maximum of six credits.

CM 395 CAREER PLANNING IN COMMUNICATIONS MEDIA 1c-0l-1sh
Prerequisite: Minimum 20 CM credits
The course serves as a primary skill-building and strategy-seeking experience for the internship program and later career entry and growth. Extensive writing, research, and individual counseling are involved. Travel may be necessary.

CM 403 WRITING FOR BROADCASTING 3c-0l-3sh
Prerequisites: CM101, permission of instructor
To acquaint students with the various techniques used in writing scripts for radio and television. To make them aware of the visual impact of television and the audio impact of radio. Students are made aware of the limitations of television and radio as well as their unique features.

CM 404 FOUNDATIONS OF BROADCASTING 3c-0l-3sh
Prerequisites: CM101, permission
Examination of the historical, legal, and economic aspects of broadcasting. Impact of broadcasting on society will be explained as well as the impact of the new technology on our existing broadcasting systems.

CM 405 RADIO PRODUCTION 3c-0l-3sh
Prerequisites: CM101, 200, 403, 404, permission
An introduction to production techniques as they pertain to radio. The student will be exposed to programming, scripting, producing programs, intros, outros, commercials, public service announcements, station identifications, and promotional announcements. The course will also deal with the interaction of a radio station with national networks and with the real-life concerns of deadlines.

CM 409 MULTI-IMAGE PRODUCTION 3c-0l-3sh
Prerequisites: CM271, 303, 440, 449, permission
An advanced production course employing instructional development techniques to emphasize the unique features of multiple image messages primarily through 2x2 slides. Scripting, storyboarding, computer programming, and audiovisual production techniques are used in the course project.

CM 430 ANALYSIS OF COMMUNICATION PRODUCTS AND PROCESSES 3c-0l-3sh
Prerequisites: CM330, permission
The course will provide both a framework for action and tools to measure the effectiveness of training and education in human and material resource development programs. The course contains practical theory and problem-focused discussion with students regarding application. Topics include instrument choice or construction, data collection and analysis, interpretation, and alternative presentation strategies of the findings.

CM 435 ORGANIZATIONAL DEVELOPMENT IN COMMUNICATIONS MEDIA 3c-0l-3sh
Prerequisites: CM330, permission
The course presents the basic methods and approaches for organization, management, and development of human and material resource departments. The topics include the primary activities and roles of a HMRD director, problem-solving functions in reporting to management, characteristics associated with career systems, and special topics.

CM 440 COMMUNICATIONS GRAPHICS 3c-0l-3sh
Prerequisites: CM101, permission
Provides basic experiences in planning and producing a commonly used television studio, industrial display, and classroom graphics which are applicable in educational, industrial, and medical training programs. Experiences include technical layout and lettering; color, mounting and laminating; copying and reproduction techniques utilizing photography and xerography; photo silk screening and photo sketching.

CM 441 ADVANCED COMMUNICATION GRAPHICS 3c-0l-3sh
Prerequisites: CM440, permission
Provides in-depth experience in planning and preparing graphic materials commonly used in the communications profession; graphic materials include design, photosketching, lettering, slide titling and duplication, preparation of camera-ready art, lithographic film and master layout sheets, professional slide flat production ad photocopy, large format transparency production, color key, and color systems.

CM 443 SLIDE AND FILMSTRIP PRODUCTION 3c-0l-3sh
Prerequisites: CM271, 303, 440, 449, permission
Beginning course emphasizing techniques of design and production of single-image slide or filmstrip presentations. Covers selection of materials and equipment, photography composition, message design, and production methods in the course project.

CM 444 BASIC MOTION PICTURE PRODUCTION 3c-0l-3sh
Prerequisites: CM101, 303, permission
Emphasizes effective use of Super 8mm motion picture cameras and editing tools to make useful locally produced films. No previous experience is necessary.

CM 445 APPLICATIONS AND TECHNIQUES OF MOTION PICTURES 3c-0l-3sh
Prerequisites: CM444, permission
A survey of the role that motion picture film production plays in society. Major emphasis will be placed on the variety of applications with special consideration given to motion pictures as a tool to support research.

CM 449 BASIC AUDIO RECORDING TECHNIQUES 3c-0l-3sh
Prerequisites: CM101, 403, permission
Theory and practice of recording sound, developing an understanding of the language of sound recording as well as the ability to make sound recordings. Exposure to recording for various media including radio, music, motion pictures, television, multi-image, and slide and tape production. Material also appropriate for teachers who wish to make use of tape recorder in the classroom. Students will gain hands-on experience through labs and projects to be completed outside of class. Students will be expected to provide an audio tape recorder.

CM 450 ADVANCED AUDIO RECORDING TECHNIQUES 3c-0l-3sh
Prerequisites: CM449, permission
Sound recording utilizing advanced techniques and concentrating on specific applications. Student participates in an intensive lab experience utilizing the most advanced equipment available. Emphasis on application, editing, signal processing, and multi-track recording. Student is expected to produce a sound recording for a specific use of professional quality.

CM 451 TELEVISION PRODUCTION 3c-0l-3sh
Prerequisites: CM101, permission
Develops basic skills in television production and direction. Consideration of operating problems of a television studio, as well as functions, limitations, and capabilities of television equipment and facilities.

CM 452 ELECTRONIC FIELD PRODUCTION 3c-0l-3sh
Prerequisites: CM451, permission
Provides in-depth field experience with portable video equipment and lighting. Students edit programs to broadcast quality.

CM 453 BROADCAST NEWS PROCESS 3c-0l-3sh
Prerequisites: CM405, 451, permission
Reporting and presenting radio and TV news programs. Analysis of news and public affairs broadcasting.

CM 454 BROADCAST REGULATION 3c-0l-3sh
Prerequisites: CM404, permission
This course delves into the areas of law affecting broadcasters. Topics covered are laws pertaining to cable television, station licensing and renewal, political broadcasting, libel, copyright, the right of reply, and privacy. The historical development of the FCC and its jurisdictions will also be examined. Case studies will be discussed along with the relevancy of some laws as they pertain to today's society.

CM 455 TELEVISION PERFORMANCE 3c-0l-3sh
Prerequisites: CM451, permission
Provides theory and practice for performing on television. Detailed analysis of a performer's role in a variety of settings.

CM 456 BROADCAST MANAGEMENT 3c-0l-3sh
Prerequisites: CM404, permission
Detailed examination of the management decision-making process in radio and television; particular reference to program policies, personnel administration, and community relations.

CM 460 ALTERNATIVE SYSTEMS OF COMMUNICATION 3c-0l-3sh
Prerequisites: CM404, permission
The implications and capabilities of cable systems, the private and industrial utilization of non-broadcast services, the emergence of satellite CATV networking, and the application of two-way cable response systems.

CM 472 PHOTOGRAPHY II: THE PRINT 3c-0l-3sh
Prerequisites: CM271, permission
Students will develop camera and print-making skills to the degree that they can produce salon-quality photographic prints. Students will understand the photographic processes utilized in producing a high-quality negative and print to the extent that they can manipulate those processes to communicate an intended message with their photographs. Emphasis on camera and print control as well as composition and negative and print manipulation.

CM 473 CREATIVE DARKROOM TECHNIQUES 3c-0l-3sh
Prerequisites: CM472, permission
Students pursue photographic competencies to a high level of proficiency. Specific topics may vary as photographic technology changes, but typical assignments include high-contrast photography through the use of graphic arts materials, multiple exposures in the camera and in projection printing, making and using paper negatives, and hand coloring of photos.

CM 474 DOCUMENTARY PHOTOGRAPHY 3c-0l-3sh
Prerequisites: CM271, 472, permission
Prepares the student to deal with the actions of subjects in both descriptive and interpretive styles. The student is assigned to photograph a variety of local events in a manner that makes the nature of the event evident to the viewer of the photograph. The student also learns differences between printing for reproduction and for exhibit. The student is required to have a 35mm camera (preferably a manual exposure single-lens reflex) and a flash unit.

CM 475 COLOR PHOTOGRAPHY 3c-0l-3sh
Prerequisites: CM271, 472, permission
An introduction to major techniques and problems of color photography including color temperature of light and color response of films, filtration, negative and reversal film processing, and making color prints from negatives and slides. Includes an introduction to color theory as it applies to photography.

CM 476 COMMERCIAL PHOTOGRAPHY 3c-0l-3sh
Prerequisites: CM271, 471, Major status, permission
An introduction to professional studio and location work, including making pictures for advertising, catalogs, publicity, and other commercial purposes. Deals with lighting, backgrounds, and camera use for photographing portraits, products, and architecture. In addition to use of the student's own 35mm camera equipment, the course provides experience with the 4x5 inch view camera. Ability to solve basic algebra problems is required.

CM 480 INDEPENDENT STUDY var-1 to 3sh
Prerequisites: Communications Media major only, permission
Students may, with the sponsorship of a department faculty member and consensus of the department, elect an advanced course of study which reflects the academic goals of the department. Exemplary project is intended to extend or combine field knowledge not readily available through other course offerings. Students may take one or more semester hours (40 hours or more of commitment = 1 s.h.) and multiple projects are possible; a maximum of 3 s.h. are permitted towards a degree program.

CM 490 INTERNSHIP var-6 to 12sh
Prerequisites: Communications Media majors only, Junior or Senior status, permission
Supervised professional work experience in communications media. Sites reflect the academic goals of the department and are approved and administered by a department coordinator. Location, duties, length of internship, and hours are individually tailored to student career goals. Sites represent wide application of process and technology of communications in business, education, allied health, or other agencies. Students may take three or more s.h. per semester (40 hours or more of commitment = 1 s.h.) and multiple experiences are possible; a maximum of 3 s.h. of internship and/or field experiences are permitted towards a degree program.

CM 495 SEMINAR IN TRAINING AND DEVELOPMENT 3c-0l-3sh
Prerequisites: CM Foundation electives, permission
Student research in advanced or specialized topics in Human and Materials Development. Current issues, problems, unique curriculums, or new processes and technology are examined as they impact upon programs, products, and individual career directions.

CO: COMPUTER SCIENCE

Department of Computer Science
College of Natural Sciences and Mathematics

CO 110 INTRODUCTION TO COMPUTER SCIENCE 2c-1d-3sh
(For science, mathematics, and computer science majors, and for others who have a sufficiently quantitative orientation)
Basic structure of modern digital computers; batch processing vs. interactive time-shared online computing; problem analysis and computer solution using flowcharting and the FORTRAN language. Exemption or credit by examination possible.

CO 200 INTRODUCTION TO COMPUTERS 3c-0l-3sh
(For nonscience, nonmathematics students who have a more verbal orientation. Does not count towards Computer Science major)
A computer appreciation course for students with an interest in computers and what they can do; survey of computer organization, flowcharting and programming; exercises in the interactive BASIC language; economic, political, psychological, and technical effects of computers in our society.

CO 220 APPLIED COMPUTER PROGRAMMING 3c-0l-3sh
Prerequisite: CO110 or equivalent
Structured programming principles and techniques, as implemented thru the ANS COBOL language; program design using top-down techniques; group programming projects; program and project documentation; introduction to tape and disc files.

CO 250 INTRODUCTION TO NUMERICAL METHODS 3c-0l-3sh
Prerequisites: CO110, MA102, MA122 or MA123 or MA127
Algorithmic methods for function evaluation, roots of equations, solutions to systems of equations operations, matrix operations, curve fitting, interpolation, numerical integration and differentiation, errors in computation.

CO 300 ASSEMBLY LANGUAGE PROGRAMMING 3c-0l-3sh
Prerequisite: CO110 or equivalent
Examination of structure and languages of machines; representation of data, addressing techniques, symbolic coding, assemblers, macros, etc; problem solution using assembly language.

CO 310 DATA STRUCTURES 3c-0l-3sh
Prerequisite: CO110 or C0220
Basic concepts of data; storage systems and structures; lists, arrays, strings, hashing techniques; searching and sorting techniques; data structures in programming languages; string processing. Programming in a block structured language.

CO 315 LARGE FILE ORGANIZATION AND ACCESS 3c-0l-3sh
Prerequisite: CO220
The organization of large computer files for business systems, information systems, and other applications. Use of COBOL for efficient file access. Evaluation of file access methods. Advanced topics in COBOL.

CO 320 SOFTWARE ENGINEERING 1c-2d-3sh
Prerequisite: CO315 or permission of the instructor
Planning, design, and implementation of large software systems using structured top-down techniques; maintenance and documentation principles and practices; large group projects.

CO 345 DATA COMMUNICATIONS 3c-0l-3sh
Prerequisites: CO110, CO220 and MA214, 216, 217, or equivalents
Communication of digital data between computers and to and from terminals and other peripherals; computer networks; design project or term paper.

CO 360 IBM JOB CONTROL LANGUAGE 1c-0l-1sh
Prerequisite: CO220 or permission of the instructor
Detailed study of the job control language (JCL) of the IBM OS operating system; comparison of OS with the locally available CP-6 operating system of Honeywell.

CO 370 COMPUTER RESOURCE MANAGEMENT 3c-0l-3sh
Prerequisite: CO220
Concepts and techniques of computing facility management, including selection of computer resources; survey of applications in which computer resource management is needed; faculty supervised management project at a selected local computer facility.

CO 380 SEMINAR ON THE COMPUTER PROFESSION 0c-1d-1sh
Reading, review, and discussion of the current literature of computer science and industry trade journals; effective oral presentations; employment prospects. Should be taken the semester before an internship or the first semester of the senior year. Should not be taken at the same time as CO480.

CO 402 COMPUTERS IN EDUCATION 3c-0l-3sh
Introduction to computers and computer programming in the language BASIC with emphasis on applications in education; general models for computer usage in education and educational institutions and case studies of specific projects in terms of approach, effectiveness, and implications for the future. Does not count toward Computer Science major.

CO 410 PROCESSOR ARCHITECTURE AND MICROPROGAMMING 3c-0l-3sh
Prerequisites: CO300 and CO310
The logical description of computer processor structure (architecture), with emphasis on the microprogramming approach. Project assignments using minicomputer.

CO 420 MODERN PROGRAMMING LANGUAGES 3c-0l-3sh
Prerequisites: CO220 and CO310
Comparative study of the properties and applications of a range of modern higher level programming languages, including APL, SNOBOL, PL/I, ALGOL 60, PASCAL, LISP, and TRAC. Comparison with older languages such as BASIC, FORTRAN, COBOL, and RPG.

CO 430 INTRODUCTION TO SYSTEMS PROGRAMMING 3c-0l-3sh
Prerequisites: CO300 and CO310
Concepts and techniques of systems programming with an emphasis on assembly and compilation of user programs. Representation of source language so as to facilitate the needed translation process. Exercises using various computer systems.

CO 432 INTRODUCTION TO OPERATING SYSTEMS 3c-0l-3sh
Prerequisites: CO300, CO310 or equivalents
Introduction to the principles of operating system design, and implementation. Topics include interrupt service, process state and transitions, spooling, management of memory and disk space, virtual storage, scheduling processes and devices, and file systems.

CO 441 DATABASE MANAGEMENT 3c-0l-3sh
Prerequisite: CO315
Review of database concepts. Detailed study of database management approaches. Comparative study of commercially available database management systems. Project on the locally available database system.

CO 450 APPLIED NUMERICAL METHODS 3c-0l-3sh
Prerequisites: CO250, MA171, and MA241, or equivalents
Polynomial approximations using finite differences, with applications in numerical integration and differentiation. Numerical solution of initial value ordinary differential equations. The APL language will be introduced and used, along with FORTRAN, in programming selected algorithms.

CO 460 THEORY OF COMPUTATION 3c-0l-3sh
Prerequisites: CO310 or consent of instructor
Formal methods for describing and analyzing programming languages and algorithms. Backus-Naur forms; productions; regular expressions; introduction to automata theory; Turing machines; recent concepts in algorithm theory.

CO 470 COMPUTER SECURITY AND FRAUD 3c-0l-3sh
Prerequisites: Junior standing; CO220/FS352 or equivalent
Physical, personnel, and administrative aspects of computer security and fraud; relevant criminal law. Administrative, internal system, and programming controls. Survey of industry computer security practice. Encryption methods and access control techniques.

CO 480 SEMINAR ON TECHNICAL TOPICS 0c-1d-1sh
Reading, review, and discussion of the current literature of computer science and industry professional and technical journals; oral presentations. Should be taken the last semester of the senior year. Should not be taken at the same time as CO380.

CO 481 SPECIAL TOPICS IN COMPUTER SCIENCE 3c-0l-3sh
Prerequisite: 12 semester hours in Computer Science or consent of instructor
Seminar in advanced topics of Computer Science; content will vary depending on interests of instructor and students. May be repeated for additional credit.

CO 485 INDEPENDENT STUDY var-1-4sh
Prerequisite: Permission of a Computer Science faculty member who agrees to supervise your project. Arrangements for selection of a specific topic must be made.

CO 493 INTERNSHIP IN COMPUTER SCIENCE var-12sh
Prerequisites: CO250, CO300, CO310, CO315, CO380, Other courses depending on type of internship position desired, completion of application, and selection by committee.
Positions with participating companies provide students with experience in Computer Science under the supervision of the companies and faculty. Requirements include three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper. Offered only to students during the second semester and summer of their junior year or the summer and the first semester of their senior year. No more than 4 semester hours of CO493 may be applied toward the 30 semester hours requirement for a major in Computer Science.

CR: CRIMINOLOGY

Department of Criminology
College of Humanities and Social Sciences

CR 101 GENERAL ADMINISTRATION OF JUSTICE 3c-0l-3sh
Administration of criminal justice in the United States. Deals with the roles of the police, courts, and correctional process.

CR 102 SURVEY OF CRIMINOLOGY 3c-0l-3sh
The purpose of this course is to provide an understanding of the discipline of criminology through an examination of its theories, basic assumptions, and definitions. Not for credit after prior CR102: Criminology.

CR 210 CRIMINAL LAW 3c-0l-3sh
A study of the history and sources of criminal law coupled with an analysis of the substantive elements of specific crimes. Not for credit after prior CR301: Criminal Law I.

CR 260 CRIMINAL PROCEDURE AND ADMISSIBILITY OF EVIDENCE 3c-0l-3sh
Law of arrest, search, and seizure, with discussion of important case law. Analysis of safeguards established for protection of individual liberties. Not for credit after prior CR302: Criminal Law II.

CR 270 JUVENILE JUSTICE SYSTEM 3c-0l-3sh
A study of the agencies and processes dealing with juvenile justice in the United States.

CR 283 POLICE PATROL ADMINISTRATION 3c-0l-3sh
The study of the role and characteristics of the police patrol function. Special emphasis is given to understanding how patrol relates to other police functions and its effect on crime.

CR 291 THEORY AND TECHNIQUES OF INTERVIEWING 3c-0l-3sh
Consideration of the theory, nature, methods, and principles of interviewing. Not for credit after prior CR350: Techniques of Interviewing.

CR 295 CRIMINAL INVESTIGATION 3c-0l-3sh
The study of logical and scientific principles necessary for the detection and investigation analysis of criminal activities. Theories of information, interrogation, observation and interrogation, and observation and ethics are along the topics to be discussed. Not for credit after prior credit CR310: Criminal Investigation.

CR 300 THEORY OF COMPLEX CRIMINAL JUSTICE ORGANIZATIONS 3c-0l-3sh
Prerequisite: CR102 or permission of instructor
Study of the evolution and theories of organizational alternatives and their application to the administration of justice.

CR 306 CRIMINOLOGICAL RESEARCH METHODS 3c-0l-3sh
Prerequisite: CR102 or permission of instructor
An introduction to the basic criminological research methods designed to prepare the student to understand and participate in quantitative and qualitative research.

CR 355 CRIME IN THE WORK PLACE 3c-0l-3sh
Study of the theoretical and legal basis of crime in the work place.

CR 357 LAW, SOCIAL CONTROL, AND SOCIETY 3c-0l-3sh
The evolution and development of the modern legal system. Topics include civil, criminal, and administration law, the legal profession, and legal systems in American society, and the law as one of many instruments of social control and social change.

CR 361 JUVENILE LAW 3c-0l-3sh
An analysis of pertinent juvenile law and procedure involving case study methods.

CR 362 CORRECTIONAL LAW 3c-0l-3sh
Study and theory of principles of law relating to rights of the convicted, postcorrection procedures, and correctional management.

CR 370 CORRECTIONAL INSTITUTIONS 3c-0l-3sh
An examination of the organization and function of correctional institutions. Emphasis is placed on various social processes and problems associated with incarceration. Not for credit after prior credit CR440: Institutional Treatment of Offenders.

CR 371 COMMUNITY BASED CORRECTIONS 3c-0l-3sh
A survey of noninstitutional programs, focusing on alternatives to incarceration in community settings. Programs reviewed include pre-release, probation, parole, half-way houses, and restitution-based programs. Not for credit after prior CR445; Noninstitutional Treatment of the Offender.

CR 383 POLICE ADMINISTRATION 3c-0l-3sh
A study of police management, structure, and operations and their roles in the quality of services delivered. The relationship between police administration and its social environment will be examined. Not for credit after prior CR201: Police Administration.

CR 386 CORRECTIONAL ADMINISTRATION 3c-0l-3sh
A study of correctional management, structures, and operations and their roles in the quality of services delivered. The relationship between correctional administration and its social environment. Not for credit after prior CR492: Correctional Administration.

CR 388 COURT ADMINISTRATION 3c-0l-3sh
A study of court responsibility within the criminal and civil justice systems, jurisdictions, policies, and management procedures in court administration.

CR 390 WOMEN AND CRIME 3c-0l-3sh
A study of the nature and extent of women's crime, theories of female criminality, processing of women offenders through the criminal justice system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

CR 391 SUBSTANCE USE AND ABUSE IN CRIMINAL JUSTICE 3c-0l-3sh
Study of substance use and abuse confronting American society. Alcohol and drug use and abuse education, philosophy, physiological effects, and social aspects will be examined in terms of control measures and public safety.

CR 396 CRIMINALISTICS 3c-0l-3sh
Application of scientific crime detection methods; emphasis on protection, collection, preservation, and interpretation of physical evidence found in connection with a crime. Not for credit after prior CR311: Criminalistics.

CR 397 INSTRUMENTAL DETECTION OF DECEPTION 3c-0l-3sh
An exploration of instrumental detection of deception, devices for measuring emotional responses to verbal stimuli, psychological aspects of deception; analysis of detection techniques applicable to the criminal justice system and personnel selection and retention. Not for credit after prior CR325: Instrumental Detection of Deception.

CR 400 THEORETICAL CRIMINOLOGY 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
A review and critical analysis of the major criminological theories beginning with the Classical School; psychological, sociological, economic, biological, and political theories of crime and its causes will be included.

CR 401 CONTEMPORARY ISSUES IN CRIMINOLOGY 3c-0l-3sh
Prerequisite: Seniors only or permission of instructor
Examination of the nature and extent of crime in modern western society. Emphasis will be placed on issues selected from, but not limited to, emerging patterns of violence, organized crime, white collar crime, victimless crime, corruption, and those crime control strategies deemed appropriate in a democracy. Not for credit after prior CR490: Crime in Modern Society.

CR 416 CRIMINAL JUSTICE PERSONNEL AND SUPERVISION 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
Study of public personnel systems with specific application to criminal justice agencies. The role and function of supervision as a concept of a comprehensive personnel system as well as the relationship between agency personnel and the impact on crime will be examined.

CR 451 ETIOLOGY OF DELINQUENT BEHAVIOR 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
An analysis of the prevalent theories of delinquency causation with a view toward developing prevention, control, and treatment approaches. Not for credit after prior CR431: Etiology of Delinquent Behavior.

CR 456 SUPERVISED RESEARCH 3c-0l-3sh
Prerequisite: CR306
Directed intensive individual research focusing on a particular issue in criminology or an applied problem in the administration of justice. The research project must be approved by the instructor.

CR 470 COMPARATIVE STUDY OF JUSTICE 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
Comparison of American systems of administration of justice with those of other nations. Not for credit after prior CR430: Comparative Study of Justice.

CR 480 SEMINAR IN CRIMINOLOGY—THE ADMINISTRATION OF JUSTICE3c-0l-3sh
A study of selected topics in criminology/the administration of justice. May be taken more than once for a maximum of 6 semester hours. Not for credit after prior CR480: Seminar in the Administration of Justice.

CR 481 SPECIAL TOPICS IN CRIMINOLOGY var-1 to 3sh
Prerequisite: Department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum 6 semester hours.

CR 482 INDEPENDENT STUDY IN CRIMINOLOGY var-1-3sh
An opportunity for a student with advanced standing to explore special interests. May be taken more than once to a maximum of 6 semester hours with the approval of instructor. Not for credit after prior CR482: Independent Study.

CR 491 INDIVIDUAL AND GROUP TREATMENT MODALITIES 3c-0l-3sh
Prerequisites: CR102, 300, or permission of instructor
A study of the therapeutic techniques, process, and application used in various criminal justice environments.

CR 493 INTERNSHIP var-3-12sh
A structured field placement designed to broaden the student's educational experience through observation and participation in work assignments in government or private sectors. Six semester hours of credit will be applied to the major requirements.

CS: CONSUMER SERVICES

Department of Consumer Services
College of Human Ecology and Health Sciences

CS 101 PERSONAL AND FAMILY MANAGEMENT 3c-0l-3sh
Management as a system and its relationship to individuals and families. Formulation of goals, values, and standards; use of decision-making process; utilization of resources.

CS 112 FUNDAMENTALS OF CLOTHING CONSTRUCTION 1c-3l-3sh
Principles and techniques involved in fundamental clothing construction and fitting are analyzed. Directed laboratory experiences provide an opportunity to solve individual problems in garment structure through the application of principles.

CS 121 INTRODUCTION TO CONSUMER SERVICES 1c-0l-1sh
Career possibilities for Consumer Services majors are explored. Students will be guided in clarifying their professional objectives and understanding the necessary preparation to pursue individual vocational goals.

CS 212 ADVANCED CLOTHING CONSTRUCTION 1c-3l-3sh
Prerequisite: CS112 or placement (by exam)
Principles of advanced fitting and clothing construction are applied and analyzed.

CS 213 RESIDENTIAL APPLIANCES AND CONSUMER ELECTRONICS 2c-2l-3sh
Consumer education in the selection, use, and care of home equipment appliances and consumer electronics; the relationship of energy sources and utilities to major appliances, portable and personal care appliances, and consumer electronics.

CS 214 ENVIRONMENTAL TEXTILES 2c-2l-3sh
Investigation of components and characteristics of textiles for man's near environment with emphasis on soft goods for public and private interiors; including production, marketing, and legislation affecting acquisition, use, and care. A student may not count both CS214 and 314 toward graduation requirements.
Offered intermittently.

CS 216 CLOTHING AND MAN 3c-0l-3sh
Prerequisite: PC101
Survey of aesthetic, cultural, sociopsychological, economic, and physical factors related to the meaning and use of clothing for the individual and society.

CS 217 INTERIOR DESIGN 1c-3l-3sh
Prerequisite: AR120 or equivalent
Emphasis upon development of knowledgeable consumers in the selection and design of a home, its furnishing, and its total environment.

CS 303 VISUAL MERCHANDISING 1c-3l-3sh
Prerequisite: AR120 or equivalent
Designing and arranging of display and selling areas in relationship to merchandising trends and consumer demands. Emphasis on promotion techniques and merchandise sales through effective use of space, design, and color.

CS 311 SOFT CONSTRUCTIONS FOR INTERIORS 1c-3l-3sh
Application of design principles to decor is executed through measurement and construction of soft furnishings for the home and contract phases of the interior design industry. Offered intermittently.

CS 312 HOUSING AND MAN 3c-0l-3sh
Managerial, sociological, economic, and aesthetic aspects of housing and man are investigated as well as a consideration of the environment of the home as part of the community.

CS 314 TEXTILES 2c-2l-3sh
Prerequisite: CH102
Analyses of textile components of fiber, yarn, fabrication, finishes, and color with emphasis upon consumer acquisition, use, and satisfaction.

CS 315 CONSUMER ECONOMICS AND FAMILY FINANCE 3c-0l-3sh
Economic, sociological, and psychological principles are applied to family money management problems. Information needed to manage finances effectively and to become a rational consumer is presented.

CS 318 FASHION MERCHANDISING 3c-0l-3sh
Prerequisites: CS216 and upper level standing
Study of the origins, movement, dissemination, and prediction of fashion; an investigation of the methods of operation, merchandising activities, and current fashion industry trends; an analysis of the planning and control procedures used in retail merchandising of fashion goods.

CS 354 INDEPENDENT STUDY var-1 to 3sh
Prerequisite: Permission
Particular consumer considerations are independently investigated in the area of housing, home equipment, interior design, clothing, and textiles, or in the management of resources. Course may be repeated for a total of 3 semester hours. Students meet with a faculty member at least 5 hours per semester hour.

CS 357 INTERIOR DESIGN STUDIO 1c-3l-3sh
Prerequisite: CS217
Creative solutions to problems in interior environments emphasized. Professional interior design practices; design opportunities.

CS 399 COOPERATIVE EDUCATION 0sh
Prerequisites: Approval of coop coordinator
A program designed to combine theory with practical application through job related experiences. Consumer services majors are actively employed in business, industry, and a variety of organizations and agencies with a work focus which relates to their academic training and career objectives. The student is required to serve a minimum of two alternating work experiences.

CS 413 PROBLEMS IN CONSUMER ECONOMICS 3c-0l-3sh
Prerequisite: CS315 or Economics
Problems of consumer-seller relationships studied with emphasis given to effects of current economic and social forces. Governmental and private protection agencies which aid the consumer are reviewed. Individual investigations required. Fall semester only.

CS 416 PROBLEMS IN FAMILY FINANCE 3c-0l-3sh
Prerequisite: CS315
In-depth theories and principles in personal and family finance and the rights and responsibilities of consumers are emphasized. Opportunities are provided for students to explore specific areas of interest. Spring semester only.

CS 421 SENIOR SEMINAR 2c-0l-3sh
Prerequisite: CS121; completion of 90 semester hours
Knowledge gained in major and outside concentration courses is applied to individual career goals. Students have the opportunity to pursue related areas not directly covered in previous course work, with emphasis upon independent research, analytical thinking, and communications skills.

CS 433 STUDY TOUR var-1 to 6sh
Prerequisite: Upper level standing
Opportunity is provided to visit business establishments and cultural centers concerned with household equipment, furnishings, textiles, clothing, and housing in America as well as abroad. Museums, factories, designers' showrooms, distribution centers, stores, cultural events, and seminars are included. Course may be repeated for a total of 6 semester hours.

CS 434 QUALITY CONTROL IN TEXTILES 2c-2l-3sh
Prerequisite: CS314
Physical properties explored through microscopic examination and use of textile testing equipment for fabric analysis. Offered intermittently.

CS 493 INTERNSHIP var-1 to 12sh
Prerequisites: Approval of instructor and department chairperson; upper level standing
Practical experience related to the student's major area of study with objectives, supervised experience, and evaluation. Course may be repeated for a total of 12 semester hours.

CS 453 FLAT PATTERN DESIGN 1c-3l-3sh
Prerequisite: CS112 or CS212
Garment design achieved by use of flat pattern techniques. An understanding is developed of the interrelationship of garment design, figure analysis, fabric, fit, and construction processes.

CS 454 TAILORING 1c-3l-3sh
Prerequisite: CS112 or CS212
Various tailoring methods are studied and applied in the selection, fitting, and construction of a tailored garment. Consumer problems in the selection of ready-to-wear apparel are investigated.

CS 455 DRAPING 1c-3l-3sh
Prerequisite: CS112 or CS212
Apparel design principles are applied by draping fabric to conform to the human figure. Students will pad a form to individual measurements and create garments that are both individual and original.

CS 456 HISTORIC COSTUME 3c-0l-3sh
Chronological study of historic costume from ancient times to the present day with emphasis on the effect of aesthetic, economic, geographic, political, religious, and social factors upon the design of clothing worn.

CS 461 MICROWAVE COOKING TECHNOLOGY 2c-2l-3sh
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

CS 462 HISTORIC INTERIORS 3c-0l-3sh
Chronological study from ancient times to the mid-19th century of the dominant influences and characteristics of historical interiors, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influence and to the contemporary scene. Paper required.

CS 463 MODERN INTERIORS 3c-0l-3sh
Chronological study from mid-19th century to the present of the dominant influences and characteristics of the 20th century interior, furniture, and ornamental design. Emphasis placed upon style detail and its relationship to social, economic, political, religious, and aesthetic influences and to contemporary usage. Paper required.

CS 464 INTERIOR PLANNING AND DRAWING 1c-3l-3sh
Prerequisite: CS217
Analysis and design contract interior spaces. Presentation, appropriate media, equipment, and techniques will be stressed. Freehand and mechanical methods employed to depict floor plans, elevation, and construction details emphasis upon function.

CS 465 INTERIOR LIGHTING 3c-0l-3sh
Prerequisite: CS217 or equivalent
Lighting fundamentals applicable to the environmental design of residential and commercial spaces. Includes calculation methods, terminology, theory of color visibility, light source alternatives, fixture function and selection, lighting trends, and related professional organizations.

DE: DISTRIBUTIVE EDUCATION

Department of Administrative Services and Business Education
College of Business

DE 331 MODERN MERCHANDISING 3c-0l-3sh
Techniques for planning and controlling inventory, analyzing sales, working with modern systems for handling cash, and using color, line, and design. Practice in preparing merchandise display units.

DE 332 RETAIL MANAGEMENT 3c-0l-3sh
Prerequisite: DE331 or DE333
Study of structure and changing environment of retailing; special emphasis on merchandise management, organization, sales promotions, services, and control.

DE 333 PRINCIPLES OF SELLING 3c-0l-3sh
Covers field of selling, preparing to sell, the selling process, and an introduction to sales management. Sales demonstrations incorporating audiovisual aids are a part of the course.

DE 413 METHODS AND EVALUATION IN DISTRIBUTIVE EDUCATION II 3c-0l-3sh
Prerequisites: DE410 or BE111, MK320, DE333, and EP302
Includes two sections of special methods and evaluation in this field. Objectives are to acquaint students with the basic principles of group and individual instruction in various subject matter areas, as well as methods of presentation. Unit plans, lesson plans, demonstrations, and evaluations will be prepared. Students select sections needed for certification.

DE 434 SEMINAR AND WORK EXPERIENCE IN DISTRIBUTIVE EDUCATION var-3sh
Prerequisite: DE333
Prior to the student teaching experience, the student spends approximately 240 hours in sales and sales-supporting activities in a distributive business. The course provides productive employment, insights into supervisory and management problems, and "hands-on" experience so that more effective coordination competencies are developed.

EC: ECONOMICS

Department of Economics
College of Humanities and Social Sciences

EC 101 BASIC ECONOMICS 3c-0l-3sh
Scarcity, role of prices in determining production and the allocation of resources, business cycle analysis, policy options for reducing unemployment and inflation, economic role of government, the farm problem, poverty, and international trade are studied. For those who do not plan to take more than 3 semester hours of economics.

EC 121 PRINCIPLES OF ECONOMICS I 3c-0l-3sh
Nature and methodology of economics; mixed capitalism and market economy; national income; employment theory, including economics of fiscal policy; money, banking, and Federal Reserve System; economic growth.

EC 122 PRINCIPLES OF ECONOMICS II 3c-0l-3sh
Economics of the firm; theory of consumer demand; determination of price and output in different market structures; distribution of income; foreign trade and the balance of payments.

EC 241 CONTEMPORARY ECONOMIC ISSUES 3c-0l-3sh
Examination of relevant and important problematic aspects of the U.S. and of world economy, including a rigorous but nontechnical analysis of problems, and a formulation and evaluation of possible corrective policies.

EC 283 ENVIRONMENTAL ECONOMICS 3c-0l-3sh
Examination of economic costs and benefits of environmental control and modification. Techniques of economic analysis are used to understand economic aspects of environmental problems and contribute toward their solution.

EC 305 MATHEMATICS FOR ECONOMISTS I 3c-0l-3sh
Elements of algebra and calculus necessary to enable students to grasp mathematical foundations of economic theory and statistical research, with examples taken from economic theory and data. This course should not be taken by students with a prior background in calculus and/or linear algebra.

EC 306 MATHEMATICS FOR ECONOMISTS II 3c-0l-3sh
Prerequisite: EC305 or its mathematical equivalent or permission of the instructor
Application of mathematical methods to microeconomics and macroeconomics, and an introduction to linear programming.

EC 320 HISTORY OF ECONOMIC THOUGHT 3c-0l-3sh
Prerequisite: EC 121 or 122 or permission of the instructor
Examination of social, political, intellectual, and economic origins of work of the more prominent past economists and of the content and impact of their work.

EC 325 MONETARY ECONOMICS I 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Organization, operation, and economic significance of U.S. monetary institutions; commercial banks and Federal Reserve System; survey of monetary theory and policy; mechanism of international payments.

EC 326 MONETARY ECONOMICS II 3c-0l-3sh
Prerequisite: EC325 or permission of the instructor
Detailed study of monetary theory; tasks of central banking; principal objectives of monetary policy; intensive study of recent monetary experience; complementary and competing aims of monetary and fiscal policy.

EC 330 LABOR ECONOMICS 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
History, structure, and operation of trade unions and employer organizations; major federal labor legislation; collective bargaining theory, wage determination, current labor problems.

EC 331 ECONOMIC ORGANIZATION OF INDUSTRY 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
Social effectiveness of industries analyzed through measures of market structure, market conduct, and market performance.

EC 332 GOVERNMENT AND BUSINESS 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
An analysis of the antitrust laws focusing on the maintenance of competition, the prohibition of unfair business conduct, and the achievement of desirable economic performance.

EC 333 REGULATION OF INDUSTRY 3c-0l-3sh
Prerequisites: EC121 and 122 or permission of the instructor
Examines the theory and practice of regulation, emphasizing effects of regulation on economic performance and efficiency in the U.S.

EC 334 ECONOMICS OF CORPORATE DECISIONS 3c-0l-3sh
Prerequisites: EC121 and 122 or permission of the instructor
Combines economic theory with algebra, elementary statistics, and calculus to solve business optimization problems. Also covers problems of forecasting and risk.

EC 335 PUBLIC FINANCE 3c-0l-3sh
Prerequisites: EC121 and 122 or permission of the instructor
Taxation and expenditure theory at the federal level; federal budget and debt considerations; public sector impact upon economy.

EC 336 STATE AND LOCAL FINANCE 3c-0l-3sh
Prerequisite: EC122 or permission of the instructor
Analysis of character and impact of state and local government revenue sources, expenditures, and fiscal systems; and intergovernmental fiscal relations.

EC 339 ECONOMIC DEVELOPMENT I 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Theory of growth; theory of economic development of underdeveloped countries.

EC 340 ECONOMIC DEVELOPMENT II 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Application of the theory of growth and analysis of economic development of selected economies; empirical and econometric studies of underdeveloped countries and their economic institutions.

EC 342 HISTORY OF THE ECONOMIC DEVELOPMENT OF MODERN EUROPE 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Study of dynamic forces which contributed to the development of modern Europe; industrial revolution in England; industrialization on the Continent; impact of Europe on world economy.

EC 343 HISTORY OF THE ECONOMIC DEVELOPMENT OF THE UNITED STATES 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Examination of the main patterns of United States economic growth since the end of the 18th century; emphasizes economic development as a laboratory for economic analysis.

EC 345 INTERNATIONAL ECONOMICS I 3c-0l-3sh
Prerequisite: EC121 and EC122 or permission of the instructor
Theory of international trade; analysis of balance of payments; international economic equilibrium; mechanism of international economic and monetary adjustments.

EC 346 INTERNATIONAL ECONOMICS II 3c-0l-3sh
Prerequisite: EC345 or permission of the instructor
Application of theory of international trade to empirical data and problems; historical survey and examination of current problems of international trade; the institutional setting of international trade.

EC 350 COMPARATIVE ECONOMIC SYSTEMS 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Capitalism, socialism, and communism subjected to economic analysis; their principles, practices, institutions, and philosophies.

EC 351 SOVIET ECONOMY 3c-0l-3sh
Prerequisite: EC121 or 122 or permission of the instructor
Thorough study of operations of Soviet economy. Course will compare and contrast workings of Soviet economy with other communist countries.

EC 355 STATISTICS FOR ECONOMISTS 3c-0l-3sh
Introduction to economic statistics. Material covered regarding empirical frequency distributions, probability, distributions of random variables, functions of random variables, and tests of economic hypotheses.

EC 356 INTRODUCTION TO ECONOMETRICS 3c-0l-3sh
Prerequisites: EC355 or its mathematical equivalent or permission of the instructor
Introduction to econometrics. Interest centers upon linear normal regression models of two or more random variables, special econometric problems, and solutions of simultaneous equations.

EC 360 ECONOMICS OF HEALTH SERVICES 3c-0l-3sh
Analysis of the allocation of resources in the health sector using demand and supply techniques. Pricing and output decisions by physicians, hospitals, and other health agencies will be considered along with other current policy issues.

EC 371 ECONOMICS OF LABOR LEGISLATION 3c-0l-3sh
Prerequisite: EC330 or permission of the instructor
Economic background and effects of governmental regulation of labor relations, with emphasis on a detailed examination of National Labor Relations Act as amended.

EC 372 ECONOMICS OF WAGES AND EMPLOYMENT 3c-0l-3sh
Prerequisite: EC330 or permission of the instructor
Analysis of wages and employment under various market structures. Also, analysis of the impact of labor market forces on wages, prices, and distributive shares.

EC 373 ECONOMICS OF HUMAN RESOURCES 3c-0l-3sh
Prerequisite: EC121 or permission of the instructor
Inquiry into economic demographics and related factors affecting growth, structure, and distribution of an economy's labor force into different occupations.

EC 374 ECONOMICS OF EDUCATION 3c-0l-3sh
Analysis of the costs and benefits of education in relation to economic growth and the private and public process of determining investment in education.

EC 382 URBAN ECONOMICS 3c-0l-3sh
Prerequisite: Three semester hours in Economics or permission of the instructor
Structure of urban economy, goals, processes, problems, and policy in urban economic development.

EC 383 REGIONAL ECONOMICS 3c-0l-3sh
Prerequisite: Three semester hours in Economics or permission of the instructor
Process of regional economic growth, location theory, basic techniques of regional analysis, public and private area development programs.

EC 421 MACROECONOMIC ANALYSIS 3c-0l-3sh
Prerequisites: EC121 and 122 or permission of the instructor
Emphasizes aggregate income levels and problems of unemployment, inflation, and growth. Covers consumption and investment theories and the role of fiscal and monetary policy.

EC 422 MICROECONOMIC ANALYSIS 3c-0l-3sh
Prerequisites: EC121 and 122 or permission of the instructor
Consumer behavior, theory of the firm, theory of exchange, market structures, distribution, general equilibrium theory, welfare economics.

EC 480 SEMINAR 3c-0l-3sh
Prerequisite: Permission of the instructor
Seminar in selected economic issues or problems.

EC 481 SPECIAL TOPICS 3c-0l-3sh
Prerequisite: Permission of the instructor

EC 482 INDEPENDENT STUDY var-1 to 6sh
Prerequisite: Permission of the department and the instructor

EC 483 HONORS IN ECONOMICS 3c-0l-3sh
Prerequisite: Permission of the instructor
Readings, conferences, and reports arranged for students who have demonstrated proficiency in economics. Research work may be directed toward theoretical or applied economic problems.

EC 493 INTERNSHIP IN ECONOMICS var-2 to 12sh
Prerequisite: A student must be an economics major who has completed at least 12 semester hours in economics and who has at least a 2.5 grade-point average in the major and in all coursework.
The course provides on-the-job experience in economics positions with private and governmental employers. The student is also required to complete related academic work in the form of papers and selected readings. Number of credits earned will depend upon the nature of the job and amount of time involved in internship. A maximum of 6 of the credits earned in this course may be counted toward the 30 semester hours in economics requirement for economics majors.

ED: EDUCATION

College of Education

ED 100 READING AND STUDY SKILLS FOR THE UNIVERSITY STUDENT 3c-0l-3sh
Designed to provide skills essential to college-level reading and study. Emphasis on fundamentals of reading comprehension, vocabulary development, and study skills necessary for academic achievement with individualization as appropriate.

ED 242 PRE-STUDENT TEACHING CLINICAL EXPERIENCE I var-1sh
Observation/participation in a basic education classroom beginning not later than the sophomore year.

ED 321 STUDENT TEACHING var-6sh
Experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 342 PRE-STUDENT TEACHING CLINICAL EXPERIENCE II var-1sh
Prerequisite: ED242
Students work toward the development of specific competencies that relate to individual major fields of teaching.

ED 408 READING IN THE CONTENT AREAS 3c-0l-3sh
Prerequisite: EL222
Problems related to teaching students reading and study skills specifically needed in each of the subject areas at the elementary level. Content teachers learn how to develop students' competence in these skills as part of their regular classroom instruction.

ED 410 THE TEACHING OF READING IN THE SECONDARY SCHOOL 3c-0l-3sh
Specific guidelines and techniques for developing reading skills in each of the content areas as well as guidelines for the organization of secondary reading programs.

ED 415 COMPUTERS IN THE SCHOOL CURRICULUM 3c-0l-3sh
Prerequisite: CO200 or permission of the instructor
Students will use a variety of computer software including word processing, record management programs, and simulation programs. Emphasis will be on the application of computer programs within the K-12 school curriculum.

ED 421 STUDENT TEACHING var-6sh
Experience in teaching at the elementary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 423 PROFESSIONAL PRACTICUM, INCLUDING SCHOOL LAW var-3sh
Series of conferences and related activities to prepare students for actual teaching experiences. Parallels student teaching experience in junior and senior years. (Elementary education majors only)

ED 431 TEACHING IN HOME ECONOMICS var-6sh
Experience in teaching home economics at the secondary level.

ED 441 STUDENT TEACHING var-6 to 12sh
Experience in teaching at the elementary or secondary level; coordination and visitation by a university faculty member with daily supervision by a cooperating classroom teacher.

ED 442 SCHOOL LAW 1c-0l-1sh
Required of all teacher certification students. Includes overview of legal principles that apply to special areas of education. Must be taken prior to student teaching.

ED 451 TEACHING SCIENCE IN THE SECONDARY SCHOOL 2c-2l-3sh
Background to help science majors meet the problems of teaching science. Various inquiry approaches useful in meeting objectives of a contemporary science class are taught and exemplified.

ED 452 TEACHING OF ENGLISH AND COMMUNICATION IN THE SECONDARY SCHOOL 3c-0l-3sh
Prerequisite: EN380
This course is a prerequisite to student teaching in English. Introduces the student to current professional practices in the teaching of English and communications in high school.

ED 453 TEACHING OF FOREIGN LANGUAGES IN THE SECONDARY SCHOOL 3c-0l-3sh
Prerequisite: Successful completion of 321-322 and 351-352 in the student's major language; passage of a language proficiency examination or permission of the instructor.
Methods and materials for secondary school teaching, current theories and techniques, and classroom demonstrations are given. (Course taught in fall semester only.)

ED 455 TEACHING OF SOCIAL SCIENCE IN SECONDARY SCHOOLS 3c-0l-3sh
Study of modern methods and techniques for teaching social science and of current curriculums in social science.

ED 456 TEACHING MATH IN THE SECONDARY SCHOOLS 3c-0l-3sh
Study of modern methods and techniques for teaching mathematics and current curriculums.

ED 457 TEACHING PHYSICS IN THE SECONDARY SCHOOL 3c-0l-3sh
Provides foundation for a prospective secondary school physics teacher in the area of current professional practices, curriculum, and methods.

ED 462 ISSUES AND INNOVATIONS IN EDUCATION 3c-0l-3sh
Study of issues and innovations which influenced education will be included in this course. Educational innovations and issues which deal with curriculum, school organization, and materials of instruction will be examined.

ED 481 SPECIAL TOPICS 3c-0l-3sh
Prerequisite: By permission only
Provides an opportunity for students to investigate in depth an area of education under professional supervision.

ED 495 INTERNATIONAL STUDY TOUR IN EDUCATION var-3sh
Study of various peoples through their cultural settings and educational systems; on-site visitation to selected schools and other social agencies and institutions; seminars with school officials and directed readings.

ED 496 INDEPENDENT STUDY var-3sh
Prerequisite: Approval of instructor and department
Advanced work in an area of the departmental curriculum.

EE: EARLY CHILDHOOD EDUCATION

Professional Studies in Education
College of Education

EE 220 LANGUAGE AND LITERATURE 3c-0l-3sh
Provides students with background on developmental chronology of communication skills in the young child and presents curricular approaches to facilitating linguistic competence. Theories of language acquisition, relationship between speech and cognition, techniques for assessing samples of children's speech, and literature appropriate for the preschool/primary child will be examined. Integrated approach to language arts that correlates listening, speaking, writing, and reading will be stressed. Students will apply these concepts during a supervised practicum experience.

EE 310 INTEGRATED CURRICULUM I 3c-0l-3sh
Examines the sequence of cognitive development in children and the implications for instructional programs. Stages of cognitive understanding will be applied to the basic components of numerical concepts and science concepts. Classroom management strategies that can be utilized in varied environments will be stressed.

EE 311 INTEGRATED CURRICULUM II 3c-0l-3sh
Enables students to realize the importance and relevance of content area subjects as related to the early childhood years. Planning for teaching with specific emphasis on methods and materials for social and environmental living is introduced. Integration of music and art areas is emphasized. Values systems and self-esteem are integral to social living.

EE 312 AESTHETIC EXPERIENCES FOR YOUNG CHILDREN 3c-0l-3sh
An interdisciplinary approach to different forms of creative expression in young children. Art, music, and movement will be analyzed as aesthetic elements in a comprehensive early childhood curriculum. Development of creative potential in both teachers and children will be promoted as a means of enhancing the artistic experiences. Students will expand their use of the arts to enhance the self-esteem and self-worth of the students as they apply their specialized knowledge and skills in directed teaching activities with small groups of children.

EE 315 PLAY AS COGNITIVE AND AFFECTIVE DEVELOPMENT 3c-0l-3sh
Provides early childhood educators with the knowledge and skills necessary to promote and guide children's play behavior as the child's basic learning mechanism. Emphasis on definitions, theories, and stages of play within the context of social, emotional, physical, and intellectual growth for children aged 0-8 years. Students will observe children at play, design specific learning activities that utilize a play/games format, and direct educational experiences during the supervised field component.

EE 451 TEACHING PRIMARY READING 3c-0l-3sh
This is a methods course designed to assist students in developing the reading abilities of young children. It deals with instructional issues related to teaching reading. It introduces students to varying reading and pre-reading processes which are effective with young children. It also emphasizes diagnostic and assessment strategies for teaching reading.

EH: EDUCATION OF THE HEARING IMPAIRED

Department of Special Education and Clinical Services
College of Education

EH 114 INTRODUCTION TO HEARING IMPAIRED 3c-0l-3sh
Prerequisites: Adviser permission, EH majors only
Deals with the different approaches used in teaching the hearing impaired - manual language, oral language, and total communication. The historical background of each approach is presented with its strengths and weaknesses. Criteria for the use of each approach established in consideration of degree of loss exhibited by the pupil, the age of onset, and the social and psychological implications.

EH 115 INTRODUCTION TO SIGN LANGUAGE 1c-0l-1sh
Development of manual dexterity and fluency using fingerspelling. Acquisition of basic sign language vocabulary. Practice acquiring general information from a signed message and conversing informally on commonly used topics.

EH 243 TOTAL COMMUNICATION 3c-0l-3sh
Prerequisite: EH114
Teaches the student to finger spell and to develop basic skill in use of a manual language (signing) so that it can be integrated simultaneously with speech to provide a means of total communication for the individual with significant communication problems. Rationale for total communication approach is emphasized with special consideration of reasons for appropriateness of approach. Methods of teaching the "sign language" to hearing impaired and other exceptional individuals is also included with emphasis on signing according to acceptable syntactical English structure.

EH 244 INTERMEDIATE SIGN LANGUAGE 1c-0l-1sh
Prerequisite: EH115
Emphasis on comprehension of signed information and on developing fluency in conveying a message in both signed English and American Sign Language. Modification of signs and individualization of techniques for instruction/communication with learning impaired or multihandicapped deaf learners.

EH 307 SPEECH FOR THE HEARING IMPAIRED 3c-0l-3sh
Prerequisites: EH 114, SH 242
Techniques for developing, diagnosing, analyzing, and correcting the speech and voice problems of hearing impaired individuals. Lecture, demonstration, and special projects.

EH 308 LANGUAGE FOR THE HEARING IMPAIRED 3c-0l-3sh
Prerequisites: EH 114, SH 234
Development and remediation of language of the hearing impaired. Language sampling and diagnostics, sentence patterning, and analytic vs. natural teaching methods. Structuring a communicative environment.

EH 330 HEARING PRACTICUM var-2sh
Prerequisite: EH360, EH115, EH244
Provides students with actual contact with hearing impaired individuals. Practica will be set up in appropriate school programs and/or clinics for the hearing impaired, or hearing itinerant programs, or in clinical settings where hearing impaired individuals are receiving therapy or are being tested. Techniques of observing and evaluating behavior are presented initially to prepare the student to profit maximally from the observation experiences. Written reports of the practica are submitted and discussed, and each student is encouraged to gain experience in as many different settings as available.

EH 331 ADVANCED SIGN LANGUAGE 1c-0l-1sh
Prerequisites: EH115, EH244
Studies the evolution of signs; dialectical sign systems. Analysis and comparison of the linguistic similarities/differences of various sign languages. Direct translation of written or spoken information on specific topics using American Sign Language or Signed English. Practice using conversation on both a social and academic level.

EH 360 GENERAL METHODOLOGY FOR EDUCATION OF HEARING IMPAIRED 3c-0l-3sh
Prerequisites: EH114, EH307, EH308
Provides a systematic coverage of the basic procedures for teaching curriculum subjects. Included are adaptive methods of instruction for teaching mathematics; science as it relates to the child and the curriculum; content, objectives, and resource materials for social studies; creative experiences in the field of language art, rhythmics, and physical education and health.

EH 365 PARENT PRESCHOOL PROGRAMS FOR THE HEARING IMPAIRED 3c-01-3sh
Prerequisites: EH114, EX220, SH234, EH308, EH307
Developing home/clinic programs for parents and hearing impaired infants (0-3 years). Teaching speech, language, speechreading, use of residual hearing, and developing readiness skills at preschool level.

EL: ELEMENTARY EDUCATION

Professional Studies in Education
College of Education

EL 211 MUSIC FOR THE ELEMENTARY GRADES 2c-0l-2sh
Geared for elementary education students: Includes basic ideas for understanding, development, and confidence for future classroom teachers and their pupils in areas of music education.

EL 212 TEACHING OF MUSIC IN THE ELEMENTARY GRADES 3c-0l-3sh
Prerequisite: EL211
Continuation of skills and understandings as developed in EL211, with emphasis on methods and materials for upper grades. Additional opportunities for growth in music reading and part singing are provided. Correlation of music with other areas.

EL 213 ART FOR THE ELEMENTARY GRADES 2c-0l-2sh
The creative use of art materials and an understanding of development of capacities of children through art.

EL 214 TEACHING ART IN THE ELEMENTARY GRADES 3c-0l-3sh
Prerequisite: EL213
In-depth experiences and two- or three-dimensional materials relative to art and credit for the elementary school child.

EL 215 CHILD DEVELOPMENT 3c-0l-3sh
Survey of human development, from conception to adolescence, in terms of basic scientific data. Development, growth, and behavior are studied and their implications for home, school, and community are considered.

EL 221 CHILDREN'S LITERATURE 3c-0l-3sh
Acquisition of a wide acquaintance with children's literature, old and new. Poetry selections, annotated stories, and bibliographies will be assembled. Ways and means to develop, stimulate, and guide children's reading of literature presented. Principles and techniques of successful storytelling are studied and practiced.

EL 222 TEACHING OF READING I 3c-0l-3sh
Systematic coverage of the teaching of reading, including methods, techniques, and materials. First of a two-course sequence.

EL 312 TEACHING OF ELEMENTARY SCIENCE 3c-0l-3sh
Emphasis placed upon science as it relates to child and curriculum, planning for teaching science, and recent innovations in science teaching. Course offered on the block only.

EL 313 TEACHING MATHEMATICS IN THE ELEMENTARY SCHOOL 3c-0l-3sh
Prerequisites: MA150, 151
Recent developments in curriculum and methods of instruction of contemporary elementary school mathematics programs. Students will become acquainted with books, materials, and other resources helpful to prospective teachers. Includes observations of master teachers.

EL 314 TEACHING OF HEALTH AND PHYSICAL EDUCATION 2c-0l-2sh
Games, stunts, rhythms, relays, tumbling, dances, and skills suitable for the elementary school child. Teaching of health in elementary school is emphasized, including methods, materials, and lesson planning.

EL 322 TEACHING OF READING II 3c-0l-3sh
Prerequisite: EL222
Second course of a two-course sequence. Systematic coverage of teaching of reading, including methods, materials, and lesson planning.

EL 330 PROBLEMS IN ELEMENTARY EDUCATION 3c-0l-3sh
Prerequisite: EP302
For in-service teachers and those working toward permanent certification. Formulation of the solutions to problems of organization and instruction in elementary school; in-depth study of teacher-pupil-parent interrelationships.

EL 351 CREATIVE ACTIVITIES IN THE ELEMENTARY SCHOOL 3c-0l-3sh
Provides student with a wide range of creative experiences in fields of art, crafts, music, rhythmics, dramatics, and games in elementary school. Stress is placed upon need to help children in developing their capacities for creative expression in these areas.

EL 353 PRE-SCHOOL EDUCATION 3c-0l-3sh
Principles and practices of guiding the learning experiences of kindergarten students. Special attention is given to observations, kindergarten program and its curriculum, material and methods of instruction.

EL 355 GUIDANCE IN THE ELEMENTARY SCHOOL 3c-0l-3sh
Study and discussion center about the child himself, his characteristics, needs, problems, material, and relationship with others, and around techniques and procedures for identifying, studying, and giving help to children.

EL 411 TEACHING OF SOCIAL STUDIES 3c-0l-3sh
Overview of social studies in elementary school. Includes study of objectives, trends, areas of content, patterns and principles of organization, and techniques of teaching. Variety of learning experiences and materials used and evaluated.

EL 413 TEACHING LANGUAGE ARTS 3c-0l-3sh
Techniques for teaching oral and written communication, spelling, handwriting, vocabulary development, listening, and linguistics for Elementary Education students. Evaluates recent trends and research.

EL 422 DIAGNOSTIC AND REMEDIAL READING 3c-0l-3sh
Prerequisite: EL222
Causes of reading disability; methods of diagnosis; procedures and materials for remedial work, group and individual.

EL 452 SOCIAL STUDIES IN THE PRIMARY GRADES 3c-0l-3sh
Prerequisite: EL411
Examination of content, objectives, and resource materials for social studies in kindergarten through third grade. Research problems examined and representative units developed.

EL 461 ORGANIZATION OF THE ELEMENTARY SCHOOL AND ITS CURRICULUM 3c-01-3sh
Study of organization of elementary school from the standpoint of curriculum design and development. Role of teacher as it relates to evaluation, improvement, and development of elementary school curriculum. Designed to be taught as a seminar course in conjunction with student teaching semester.

EL 463 WORKSHOP IN ELEMENTARY TEACHING var-3sh
Prerequisite: At least one student teaching experience.
Designed for in-service teachers and those who are preparing to work with elementary school children, including elementary education majors who have had at least one student teaching experience. Course provides for investigation of subject matter, materials, methods, and procedures used in the modern elementary classroom. Emphasis placed upon observation and participation in programs currently being demonstrated in the University School.

EL 481 INDEPENDENT STUDY

EN: ENGLISH

Department of English
College of Humanities and Social Sciences

EN 100 BASIC ENGLISH 3c-0l-3sh
Designed to develop the basic English skills necessary for clear and effective communication. Reserved for selected students. This course does not meet General Education English requirements.

EN 101 ENGLISH I 3c-var-4sh
Normally to be taken the first semester at IUP. Courses use readings in the nature and history of language, semantic and linguistic analysis, and problems in rhetoric and other approaches to composition. Seven theme-length expository papers (or the equivalent) are written, in addition to shorter exercises and a written final examination.

EN 102 ENGLISH II 3c-0l-3sh
Prerequisite: EN101
Analytical reading of various types of nonfictional prose, aimed at enunciating both meaning and techniques by which meaning is manifested. Writing in course consists of three substantial documented papers.

EN 150 ENGLISH FOR FOREIGN STUDENTS 3c-0l-3sh
Provides foreign students with an opportunity to improve their ability to speak and write English. The emphasis is on individualized exercises and assignments. This course does not meet General Education English requirements.

EN 201 ENGLISH III 3c-0l-3sh
Prerequisites: EN101, 102
Focuses on the careful reading of an imaginative literature. Writing consists of two substantial critical papers on themes generated by the reading.

EN 208 THE ART OF THE FILM 3c-0l-3sh
Concentrates on the film as an artistic medium. Eight to 12 motion pictures are shown during semester and are analyzed in class discussions.

EN 209 LANGUAGES OF MEDIA 3c-0l-3sh
Prerequisites: EN101, 102
An introductory investigation of the nature of communication media. The course takes up several fundamental aspects of media theory, analyzes the "grammar" and "logic" of specific media (in particular, the press, radio, and TV), and examines the way in which the structure of any medium and the formats employed pattern the contents of what is transmitted.

EN 210 INTRODUCTION TO LITERARY ANALYSIS 3c-0l-3sh
Prerequisites: EN101, 102
Acquaints students with the three literary genres (fiction, poetry, and drama) by means of examples of each and provides them with some of the various critical approaches to the interpretation of literature so that they may gain the ability to apply them. At the conclusion of the course, students are expected to be able to read literature in each of the genres perceptively and to write critical papers about it.

EN 211 ENGLISH LITERATURE TO THE RESTORATION 3c-0l-ash
Prerequisites: EN101, 102
Corequisite: EN210
Surveys English literature from its beginnings to the Restoration, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and provides them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate works.

EN 212 ENGLISH LITERATURE FROM THE RESTORATION TO 1900 3c-0l-3sh
Prerequisites: EN101, 102
Corequisite: EN210
Surveys English literature from the Restoration to the beginning of the 20th century, acquainting students with the experience of reading many of the primary materials (whole works whenever possible or full, free-standing parts) and providing them with background information concerning the development and flowering of the various genres, the dominant ideas of each period, and the social and cultural context of the separate work.

EN 213 AMERICAN LITERATURE: BEGINNINGS TO THE PRESENT 3c-0l-3sh
Prerequisites: EN101, 102
Corequisite: EN210
Provides an understanding of American literature from its beginning to roughly the middle of the present century. The course will concentrate attention primarily upon a relatively small number of major works, each of which will help to illustrate the "spirit of the age" it represents. Eight such periods will be studied, and the course will seek to explore both the works and their context (theological, philosophical, literary, political, etc.) for a greater illumination of both. Other works and authors will be presented against this background but will receive less attention.

EN 214 THE NOVEL 3c-0l-3sh
Prerequisites: EN101, 102
This course surveys the development of the novel from Cervantes' "Don Quixote" to the present with emphasis on major writers and forms in English.

EN 215 POETRY 3c-0l-3sh
Prerequisites: EN101, 102
A study in appreciation of poetry, with special attention to the technique of the poet and structure of poetry.

EN 216 SHORT FICTION 3c-0l-3sh
Prerequisites: EN101, 102
A study of the development of the short story from the middle of the 19th century to the present with attention to form, structure, and types of the story.

EN 217 DRAMA 3c-0l-3sh
Prerequisites: EN101, 102
A study of selected plays from various periods in an attempt to understand the function of drama.

EN 218 LITERATURE FOR ADOLESCENTS 3c-0l-3sh
Prerequisites: EN101, 102
Surveys poetry, drama, and fiction with which the adolescent is familiar through his school work and his personal reading.

EN 220 ADVANCED COMPOSITION I 3c-0l-3sh
Prerequisites: EN101, 102
Primarily seeks to improve writing style, particularly in the more utilitarian forms, such as magazine article and personal essay.

EN 221 CREATIVE WRITING 3c-0l-3sh
Prerequisites: EN101, 102
This is a seminar course in which students are expected to produce a substantial body of written work in one or more of the creative genres, the particular kind of writing chosen with regard to the special interests and abilities of each student.

EN 310 PUBLIC SPEAKING 3c-0l-3sh
Prerequisites: EN101, 102
Fundamental principles of public speaking, audience analysis, interest and attention, selection and organization of speech material.

EN 311 ORAL INTERPRETATION 3c-0l-3sh
Prerequisites: EN101, 102, 310
Emphasizes understanding and appreciation of literature through developing skill in reading aloud.

EN 312 SPEECH—PERSUASION 3c-0l-3sh
Prerequisites: EN101, 102
Advanced study of problems involved in influencing an audience.

EN 313 HISTORY OF RHETORICAL THEORY 3c-0l-3sh
Prerequisites: EN101, 102, 210
Survey of rhetorical theory from Greek and Roman through modern times.

EN 320 ADVANCED COMPOSITION II 3c-0l-3sh
Prerequisites: EN101, 102, 210, 220
Workshop and tutorial atmosphere for students who intend to write or teach writing.

EN 321 CREATIVE WRITING II 3c-0l-3sh
Prerequisite: EN101, 102, 221
A workshop for students who wish to write fiction or poetry under guidance of instructor.

EN 322 TECHNICAL WRITING 3c-0l-3sh
Prerequisites: EN101, 102
This course focuses on helping the student to acquire and to apply communication skills essential to the technical and professional writer.

EN 324 TEACHING AND EVALUATING WRITING 3c-0l-3sh
Prerequisites: EN101, 102
A study of modern approaches to the teaching of writing, including current theories on the composing process, as well as instruction in evaluating, including holistic scoring. Course includes practice in writing.

EN 329 THE HISTORY OF THE ENGLISH LANGUAGE 1c-0l-1sh
Prerequisites: EN101, 102
Studies historical development of the English language, as a basis for a better understanding of modern American English.

EN 330 THE STRUCTURE OF ENGLISH 3c-0l-3sh
Prerequisites: EN101, 102
An introduction to the fundamentals of language study with equal emphasis on the sound, word, sentence, meaning, and discourse patterns of English. Educationally relevant topics, such as applications of linguistics to the teaching of English language and literature, varieties of grammar, and linguistic descriptions of styles and registers are an integral part of the course. Course is a prerequisite for ED 452, Teaching of English and Speech in the Secondary School.

EN 331 TRENDS IN LINGUISTICS 3c-0l-3sh
Prerequisites: EN101, 102
Explores recent developments in linguistic theory and research.

EN 332 THE DIALECTS OF AMERICAN ENGLISH 3c-0l-3sh
Prerequisites: EN101, 102
An introduction to varieties of social and regional dialects in the United States with special attention to dialect diversity in urban settings. Course also focuses on the role of language in schooling, including language attitudes of teachers and students.

EN 333 PSYCHOLINGUISTICS 3c-0l-3sh
Prerequisites: EN101, 102
Psycholinguistics concerns the interrelation between language system and behavior and various factors of human psychology. The course surveys developments since the 1940s, including relationships between language and perception, biology, memory, meaning, and cognition, as well as oral and written behavior. Students of language and literature may improve their assumptions about how human beings use language.

EN 334 ESL METHODS AND MATERIALS 3c-0l-3sh
Prerequisites: Junior standing or permission of the instructor
An introduction to English as a Second Language theory and practice. Aims: (1) general understanding of current theory and methods of teaching ESL; and (2) ability to select appropriate, and adapt existing, materials for elementary and high school ESL students. Recommended for all English teachers who expect to have ESL students in their classes.

EN 340 CHAUCER 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Studies Chaucer, his life, his language, the development of his literary style and his art, with and through his major poetical works.

EN 341 SHAKESPEARE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Studies Shakespeare's development as a poetic dramatist against background of Elizabethan stage; examines audience, textual problems, language imagery, and philosophy.

EN 342 MILTON 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Consists of a close reading the major English poems and prose of John Milton, with particular attention to Paradise Lost and Samson Agonistes.

EN 343 MAJOR AMERICAN AUTHOR
Prerequisite: EN101, 102, 210
Corequisites: EN211, 212, 213
Studies in the literary output of a major American author or authors against the background of the social and literary milieu in which the works were created. Specific subject or subjects to be announced by the instructor.

EN 345 CLASSICAL LITERATURE IN TRANSLATION 3c-0l-3sh
Prerequisites: EN101, 102
Masterpieces studied range from those of ancient Greece to Middle Ages. English literature and American literature excluded.

EN 346 CONTEMPORARY AMERICAN AND BRITISH POETRY 3c-0l-3sh
Prerequisites: EN101, 102
Study of British and American poetry since World War II.

EN 347 MODERN AMERICAN FICTION 3c-0l-3sh
Prerequisites: EN101, 102
Major American writers of fiction since 1945 are considered.

EN 348 BLACK AMERICAN LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102
Analyzes significant Black American literature of a variety of types—autobiography, essay, fiction, poetry.

EN 349 ENGLISH BIBLE AS LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102
Considers literary aspects of the English Bible by relating earlier translations to the Authorized Version of 1611 and by tracing some of the major influences of the King James Bible upon writers and speakers of modern English.

EN 350 THE METAPHORIC PERSPECTIVE 3c-0l-3sh
Prerequisites: EN101, 102
Corequisites: EN211, 212, 213
Acquaints students with the means by which metaphor expands our awareness, providing us in its more extreme examples with what has been called "the strategy of the dream." Specifically the course explores metaphor as a "perspective by incongruity," which may be embedded in poetic structures or may be itself the controlling structure for longer works of fiction and nonfiction.

EN 351 THE LITERATURE OF DISCURSIVE REASON 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Examines literature that displays the mind's analytic process. Readings include essays and other nonfiction as well as poetry, drama, and fiction.

EN 352 SYMBOL AND ALLEGORY 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Examines symbol and allegory as means of comprehending and expressing profound aspects of existence. Explores the distinction between symbolic and allegorical modes of thought.

EN 353 THE ORAL DIMENSION 3c-0l-3sh
Acquaints students with the nature of oral composition, the habits of thought that orality fosters, and the particular mode of awareness the oral dimension of literature demands of an audience (and awakens in a reader). At the conclusion of the course students should have an understanding of the formulaic nature of such purely oral forms as the ballad and the epic and an awareness of the manner in which orality patterns thought differently from writing, and they should be able to detect oral features and patterns in works of literature from cultures not primarily oral but containing a high "oral residue."

EN 360 ROMANTICISM 3c-0l-3sh
Prerequisites: EN101, 102
Corequisites: EN211, 212, 213
Focuses on literature in its milieu and emphasizes an understanding of Romantic literature from its development in Germany and France to its flowering in England and America.

EN 361 THE RENAISSANCE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Studies the revolutionary changes in artistic, ethical, and political thinking brought about by the European and English Renaissance as these changes are manifested in the literature of that age and succeeding ones. In particular, the course focuses upon the origin and later development of such notions as self-development, individuality, and the acquisition and maintenance of power.

EN 362 CHIVALRY AND COURTLY LOVE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
A major purpose of this course is to give students a broad awareness of the cultural milieu of the High Middle Ages through a study of chivalry and courtly love as well as an understanding of how this literary genre was born, evolved over time and across cultures, and continues to structure elements in our own culture. Examines theories which seek to explain the development of the codes of courtly love and chivalry and the literature which gives evidence of their existence and development.

EN 363 THE PURITAN MIND IN ENGLAND AND AMERICA 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Examines what is distinctive in the intellectual outlooks of Puritanism as it is directly embodied in the literature of England and America in the 16th, 17th, and 18th centuries and indirectly in the literature of later ages down to the present.

EN 370 MYTH AND LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Introduces students to the nature and function of the mythic experience and makes them aware of the integral relation myth has with literature of all times and cultures, including our own. Illustrates how myth creates meaning, orders experience, and enters into literary techniques.

EN 371 HERO AND ANTI-HERO 3c-0l-3sh
Prerequisites: EN101, 102, 212
Corequisites: EN211, 212, 213
Examines the range of heroic and antiheroic protagonists and actions in literature of various times and countries with an additional focus upon the specific world views that make heroic and antiheroic behavior effective or even possible.

EN 372 ALIENATION IN LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Explores literature from various times and places for what it shows us of the separation of self from the external world— the estrangement of human beings from others as well as from themselves—its origin, nature, and various forms.

EN 373 CONCEPTS OF CHARACTER IN DRAMA AND NOVEL 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 214
Traces the techniques literary artists employ to portray aspects of personality and examines the influence upon character portrayal of such diverse factors as the chosen genre, contemporary notions of character depiction, and prevailing psychological theories contemporary with the works.

EN 380 COUNTRY LIFE-CITY LIFE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Investigates the dynamic relationship between literature and two relatively distinct social environments—the town and the country. The course examines its literary genres, modes, and preoccupations peculiar to the separate social climates as well as the body of literature reflecting the painful collision between the two and its effects upon such human concerns as families, the celebration of love and death, or the perception of the substance of nature itself.

EN 381 POVERTY AND CLASS IN LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Examines major literary works that document the conditions created by class and caste division and the poverty that is visited upon a portion of the people as well as the social values that seek to justify or condemn class divisions. The course examines an extensive body of images of the poor, concepts about class and caste, and the consequence of class division.

EN 382 WAR IN LITERATURE 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
Presents representations of war in literature from Homer's Iliad to the Eighth Air Force in Italy during World War II, illustrating that during wartime other aspects of human experience are often intensified—love, the joys of peace, feelings for nature.

EN 383 MAN IN THE NATURAL WORLD 3c-0l-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
This course attempts to understand the literature which concerns itself with the relationship between nature and man by viewing that interaction, at least initially, as either antagonistic or sympathetic: in the first case man dominates or exploits, while in the second he participates. The first attitude can be most easily seen in the traditional Hebraic-Christian view, while the second appears as romanticism, or more currently, as ecological awareness.

EN 390 LITERARY TOUR: BRITAIN var-3sh
Offered selected summers, either for three weeks during Pre-Session or for six weeks during Main Session. Visits London, Stratford, and Cambridge or Oxford, as well as other places important in English literature.

EN 391 SELECTED WORKS FROM THE MEDIEVAL PERIOD 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se, and as representative of major themes of medieval European literature. This course is also listed as FL391.

EN 392 RENAISSANCE/BAROQUE/CLASSICAL 3c-0l-3sh
Prerequisites: EN101, 102
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's "Renaissance and Baroque." This course is also listed as FL392.

EN 393 ROMANTICISM 3c-0l-3sh
Prerequisites: EN101, 102
Study of the principal authors and works of late 18th-century and early 19th-century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. This course is also listed as FL393.

EN 394 NINETEENTH-CENTURY EUROPEAN NOVEL IN TRANSLATION 3c-0l-3sh
Prerequisites: EN101, 102
A survey of major 19th-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism, and the cultural, historical, social, and artistic relationships between the various national literatures. This course is also listed as FL394.

EN 395 SELECTED WRITERS FROM 20TH-CENTURY EUROPE 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se or as representatives of major trends in 20th-century European literature. This course is also listed as FL395.

EN 396 THE LITERATURE OF EMERGING NATIONS 3c-0l-3sh
Prerequisites: EN101, 102
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and colonial circumstances. This course is also listed as FL396.

EN 493 INTERNSHIP var-3 to 12sh
On-the-job training opportunities in related areas.

EN 480 SEMINAR: STUDIES IN ENGLISH AND AMERICAN LITERATURE var-3sh
Prerequisites: EN101, 102, 210
Corequisites: EN211, 212, 213
A seminar experience designed for students whose academic work qualifies them for entrance into it. Students considering graduate work in English might well wish to enroll, but students with a variety of career goals—business, industry, law, government service—can take advantage of this opportunity to plan a schedule of independent study with the help of a faculty mentor.

EN 481 SPECIAL TOPICS var-1 to 3sh
These courses vary from semester to semester, covering such diverse topics as autobiography, science fiction, folklore, the political novel, black theater, etc.

EN 482 INDEPENDENT STUDY var-1 to 6sh
Opportunities for independent study that go beyond the usual classroom activities. Approval of department chairperson required.

EP: EDUCATIONAL PSYCHOLOGY

Department of Educational Psychology
College of Education

EP 302 EDUCATIONAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC101
(Required of all Education majors - it is recommended that this course be taken prior to the student teaching experience)
Designed to promote a better understanding of the principles of psychology governing human behavior, with particular emphasis on their relation to learner, learning process, and learning situation in an educational environment.

EP 303 THE PSYCHOLOGY OF EFFECTIVE PROFESSIONAL PRESENTATIONS 3c-0l-3sh
Designed to give students awareness and skills in the areas of professional presentations. Concerned with dress, diction, and decorum. Emphasis on effective speaking and professional dress, with particular attention to the interview.

EP 304 CAREER PLANNING AND DEVELOPMENT 1c-0l-1sh
Designed to explore and define personal professional goals. Resume writing, letters of application, networking, credentials file, and interview techniques are stressed. Background experiences, projected lifestyle, and academic preparation are integrated as foundations of job search.

EP 311 PSYCHOLOGY OF TEACHING SEX EDUCATION 3c-0l-3sh
Explores the methods of teaching sex education to elementary, intermediate, and secondary levels; the sexual development of the child through adolescence and adulthood.

EP 372 PSYCHOLOGY OF CHILDHOOD EDUCATION 3c-0l-3sh
Prerequisite: EP302
Emphasizes relationship which physical, social, emotional, and intellectual development have on theory and practice of childhood education.

EP 373 PSYCHOLOGY OF ADOLESCENT EDUCATION 3c-0l-3sh
Prerequisite: EP302
Study of significant characteristics, behavior, and educational and social problems of adolescents.

EP 376 BEHAVIOR PROBLEMS 3c-0l-3sh
Prerequisite: EP302
Examination of emotional and social aspects of behavior problems encountered in classroom situations and potential remedial techniques.

EP 377 EDUCATIONAL TESTS AND MEASUREMENTS 3c-0l-3sh
Prerequisite: PC101
(Recommended that this course be taken prior to student teaching experience)
Designed to acquaint students with major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of individuals in an educational environment. Includes interpretation of standardized test information and basic research techniques.

EP 378 LEARNING 3c-0l-3sh
Prerequisite: EP302
Explores learning theories and educational application in the classroom.

EP 383 EDUCATION OF THE DISADVANTAGED STUDENT 3c-0l-3sh
Prerequisite: EP302
Acquisition of necessary understandings of physiological, psychological, and social implications relevant to working with and teaching the disadvantaged student.

EP 384 FIELD EXPERIENCE 3c-0l-3sh
Prerequisite: EP302
Provides student with tutorial experience in the public schools and social service organizations with professional supervision.

EP 385 HUMANIZING THE CLASSROOM 3c-0l-3sh
An experimental course concerned with human-relations-skills training with particular emphasis on group process, non-verbal communication, listening and responding skills. The focus of this course is primarily on the translation of these skills into effecting productive classroom environments in educational settings.

EP 388 INTERPERSONAL EFFECTIVENESS AND COMMUNICATION SKILLS 3c-0l-3sh
This is a course devoted to increasing professional effectiveness and improving communication skills within educational, business, and industrial settings. Course content includes analysis of nonverbal behaviors, active listening, rational self-analysis, and assertion skills.

EP 481 SPECIAL TOPICS IN EDUCATIONAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: Department Chairperson permission.
Provides opportunity for students to investigate in depth an area of Educational Psychology under professional supervision.

EP 499 INDEPENDENT STUDY var-1-3sh

EX: EDUCATION OF EXCEPTIONAL PERSONS
Department of Special Education and Clinical Services
College of Education

EX 120 INTRODUCTION TO EXCEPTIONAL PERSONS 3c-0l-3sh
Prerequisite: For Department Majors and Official Incoming Transfers Only
Surveys characteristics, needs, problems, and behavior patterns of any person who deviates sufficiently from "normal" to be considered exceptional. Consideration to those who fall intellectually both above and below average, those who are handicapped visually, acoustically, behaviorally, orthopedically, neurologically, or in respect to speech patterns.

EX 220 TYPICAL AND ATYPICAL GROWTH AND DEVELOPMENT 3c-0l-3sh
Prerequisites: EX120, PC101
Presents foundations of human growth from conception, including basic embryogenesis, up to but not including adolescence. Considers the biological, cultural, educational, and parenting influences that shape the child, as well as selective examples of normal and deviant physical and intellectual development.

EX 240 TEACHING MATH FOR THE MENTALLY AND/OR PHYSICALLY HANDICAPPED 3c-0l-3sh
Prerequisites: MA151, EX120
Emphasizes recent developments in elementary curriculum and instructional techniques for developing concepts; implications of recent resource developments and materials helpful to the prospective special education teacher. Emphasis is also placed on methods of helping children learn mathematical concepts through physical activity and on ways to adapt regular classroom materials to meet needs and abilities of slow and disabled learners.

EX 251 METHODS OF TEACHING READING 3c-0l-3sh
Prerequisite: Sophomore status or above
Presents basic concepts of developmental reading instruction and systematic coverage of the methods of teaching reading from readiness stages through 8th grade. Diagnostic-prescriptive techniques are included.

EX 280 DIRECTED ACTIVITIES I var-1sh
Prerequisites: EX120 and departmental permission
Provides for opportunities to observe mentally and/or physically handicapped persons in a variety of settings. Through passive observations students have opportunities to confirm their interest in the field of special education. Offered only to freshmen, first-semester sophomores, and qualified transfer students.

EX 300 EDUCATION OF THE EXCEPTIONAL IN THE REGULAR CLASSROOM 3c-01-3sh
For non-Special Education majors only.
Surveys traits, needs, problems, and behavior patterns of the exceptional person and indicates methods and considerations for the regular classroom teacher while encountering the exceptional person in his/her classroom. Legal rights of the exceptional are stressed and contributions of the disabled to society are presented. Implications regarding parenting of exceptional children and youth are included.

EX 341 THE SOCIALLY AND EMOTIONALLY MALADJUSTED 3c-0l-3sh
Prerequisite: Departmental permission
Provides for an understanding of the characteristics and educational programming for the socially and/or emotionally maladjusted. Considers the relationship between socially and emotionally maladjusted and other areas of exceptionality.

EX 343 CONTENT AREA SUBJECTS FOR THE MENTALLY AND/OR PHYSICALLY HANDICAPPED 3c-0l-3sh
Prerequisite: EX120
Presents methods for teaching science and social studies to the mentally and/or physically handicapped. Scope and sequence of content, as well as evaluative techniques for each content area, are studied. Integration of other content areas and skill areas is stressed. Also stresses teaching in both resource room and less restrictive environments.

EX 353 READING AND OTHER LANGUAGE ARTS FOR THE MENTALLY AND/OR PHYSICALLY HANDICAPPED 3c-0l-3sh
Prerequisites: EX120, EX251, and SH254
Review of typical and atypical characteristics of the handicapped in relationship to the language arts. Deals with preparation and execution of units of instruction in language arts for mentally and/or physically handicapped persons. Diagnostic and prescriptive approaches are included; integration of language arts with a highlight on reading is stressed.

EX 362 PSYCHOLOGY OF READING IN LANGUAGE PROCESSING 3c-0l-3sh
For Speech Pathology and Audiology majors only
Examines the language structure of reading by considering the psychology of understanding, speaking, reading, and writing as a sequence for communication. Encourages enrollees to apply pertinent matters related to the reading profession to the field of speech pathology and audiology.

EX 370 ASSESSMENT OF THE MENTALLY AND/OR PHYSICALLY HANDICAPPED 3c-0l-3sh
Prerequisites: EX120, EP377
Emphasis on appropriate use of assessments. Procedures for employing standardized tests and informal evaluative procedures within the realm of competency of the special educator. Applications based on results of all types of assessment complying with current legislation. Applications to the Individual Education Program (IEP) are taught.

EX 380 DIRECTED ACTIVITIES II var-1sh
Prerequisites: Departmental permission and EX280
Offered to qualified junior and senior majors. Enrollees actively participate, under strict agency supervision, with exceptional persons in classroom, clinic, institution, and/or other special settings. Each semester hour of credit includes both participation and written assignments. With departmental approval, course may be repeated for credit.

EX 410 SEMINAR IN SPECIAL EDUCATION 3c-0l-3sh
Prerequisite: Enrollment by invitation only
Gives students who have demonstrated outstanding potential for contributing to the field, opportunities to explore specific areas in greater depth.

EX 430 PHYSICAL DISABILITIES AND PSYCHOLOGICAL HANDICAPS 3c-0l-3sh
Prerequisites: EX120, EX220
Provides for in-depth study of the most prevalent physical disabilities, indicates coping mechanisms used by some of the afflicted, and shows how the physically disabled who do not develop coping strategies become psychologically handicapped. Adaptation of teaching materials, equipment, and facilities are discussed. Rationale for placements in the various educational environments is included.

EX 450 METHODS AND CURRICULAR PLANNING FOR MILDLY AND MODERATELY HANDICAPPED 3c-0l-3sh
Prerequisite: Departmental permission
Provides for in-depth examination of methods, strategies, and curriculums with which special educators are faced. Special projects of a practical nature are included to provide enrollees experiences with planning, application, analysis, synthesis, and evaluation.

EX 454 THE BRAIN INJURED AND THE LEARNING DISABLED 3c-0l-3sh
Prerequisite: Departmental permission
Provides guidelines and methods of teaching the brain injured and learning disabled. Emphasizes methods of providing basic skill development in areas of motor, perceptual, cognitive, language, and social skills.

EX 457 SEVERE AND PROFOUND RETARDATION AND MULTIPLE DISABILITIES 3c-0l-3sh
Prerequisite: Departmental permission
Provides guidelines and methods for working with the extremely disabled in educational settings. Emphasizes methods of providing stimulation of basic skill development in areas of motor, perceptual, cognitive, language, and social skills.

EX 464 PRESCHOOL EDUCATION OF THE HANDICAPPED 3c-0l-3sh
Prerequisite: Departmental permission
Provides the student with basic concepts for educating all preschool handicapped youngsters and serves as a course for exceptional education majors specifically interested in early childhood education and intervention programs. Required for elementary majors in the early childhood program, is an elective for other interested students.

EX 480 SELECTED PROBLEMS var-1-3sh
Prerequisite: Departmental permission
Interested students may use this course for the pursuit of knowledge regarding specific concerns of the exceptional which are not ordinarily considered in such detail during regular classroom instruction. Students wishing to enroll are expected to submit a written proposal regarding their desire for study at the time permission for enrollment is sought. With permission, the course may be repeated for credit.

EX 490 ETHICAL AND PROFESSIONAL BEHAVIOR 1c-0l-1sh
Prerequisite: Departmental permission
Emphasis on ethical and professional behavior for student teachers and professional employees. Possibilities for and methods of initiating and profiting from postbaccalaureate study are indicated. Student teachers are required to complete and present a curriculum book regarding each student teaching experience.

FA: FINE ARTS

College of Fine Arts

FA 493 INTERNSHIP var-3 to 12sh
This internship covers the areas of the visual and performing arts.

FE: FOUNDATIONS OF EDUCATION

Department of Foundations of Education
College of Education

Note: In a restructuring of the College of Education, foundations of education (FE) courses formerly associated with the Department of Foundations of Education may be offered through other departments. Transitions are in process at catalog deadline.

FE 302 HISTORY AND PHILOSOPHY OF EDUCATION 3c-0l-3sh
Provides an introduction to some of the major traditional and contemporary philosophic concepts which have played a role in the formation of educational policies and practices. Emphasis on the relationship between educational theory and practice in such areas as the role of the school in society, curricular content, teaching and learning methodology, educational goals, and professionalism.

FE 414 COMPARATIVE FOUNDATIONS OF EDUCATION (Dual Level) 3c-0l-3sh
Analysis, evaluation, and especially comparison of educational purposes, curriculum, and methods in some western European nations, some developing nations in Africa, Asia, and Latin America, and some communist nations including U.S.S.R. and P.R.C. The educational theories and practices in the United States will be compared with those in other lands. Designed to develop insight into new ideas and practices in American schools.

FE 415 CURRICULUM DEVELOPMENT (Dual Level) 3c-0l-3sh
Analysis of philosophical, sociological, and psychological basis for creation of curricular patterns, K-12. Includes utilization of technological devices, critical examination of basic concepts underlying determination of objectives, and selection and organization of subject matter and of learning experiences in general. Current curriculum research will be analyzed, as will existing instructional materials and programs.

FE 433 SCHOOL LAW 1c-0l-1sh
Introduction to the legal framework within which the school operates. Includes study of both federal and Pennsylvania law which influences the conduct of the school.

FE 440 ORIENTATION TO TEACHING IN URBAN CENTERS 3c-0l-3sh
Provides students with an understanding of learners and their unique learning needs and conditions. Emphasis on understanding the origin of attitudes and values and how these affect the relationships which exist between students and teachers. Special attention to practical application of theoretical information to problems of urban education. Field trips and guest speakers will be emphasized.

FE 441 FIELD EXPERIENCES IN URBAN CENTERS var-6sh
Prerequisite: FE440
Provides specialized experience for students desiring to teach in inner-city schools. Aspects to be emphasized include physical characteristics of community, background and aspirations of children and youth, and specialized teacher competencies, classroom management, planning, instructional materials, teaching strategies, and evaluations. Records of comprehensive experiences in urban areas will be considered in making field experience assignments. Schools selected for student experience will be located in Pittsburgh.

FE 442 INTERPRETING URBAN/FIELD EXPERIENCES var-3sh
Prerequisites: FE440, FE441
Evaluation of learning and behavior problems encountered during field experience in urban schools. Flexible approach stressed to encourage wide range of investigation and exploration of psychological and sociological problems as they affect education. Supervision and guidance for investigating specific problems provided by specialists from psychology, sociology, and education who will function as resource personnel providing direction enabling students to combine experiences gained by teaching in urban schools with recent and pertinent theoretical information.

FE 454 PUBLIC SCHOOL ADMINISTRATION 3c-0l-3sh
Study of the development of public school administration; current organizational patterns for public education at the local, county, state, and national levels; and the impact of administration upon the total educational program.

FE 456 ISSUES AND TRENDS IN EDUCATION (DUAL LEVEL) 3c-0l-3sh
Critical analysis of issues and trends in education with emphasis on philosophical and social dimensions of topics covered. Attention to work of some major contemporary critics of education.

FE 495 INTERNATIONAL EDUCATION STUDIES PROGRAM var-3sh
(Dual Level)
Affords educators and students opportunity to investigate school systems in cultural settings other than their own. Particular attention to such issues as curriculum, teaching, and learning process, teacher education, and the changing cultural patterns and value system impacting upon education. Travel-seminar with educators, teachers, students, and parents in a foreign country. On-site visitation to selected schools and social and cultural institutions.

FI: FINANCE

Department of Finance and Management Information Systems
College of Business

FI 220 ESSENTIALS OF FINANCE 3c-0l-3sh
Provides students with a survey of three fundamental areas of finance: 1) Corporate finance, 2) Basic Investment, and 3) Financial Intermediation and the Monetary System. Students will be introduced to financial analysis, planning, and control; to the management (the acquisition and allocation) of funds; and to the fundamentals of the time value of money and capital budgeting. Students will be familiarized with the basic investment markets, fundamental and technical analysis, and portfolio analysis. Students will also consider the influence of government and financial institutions on interest rates, sources of finance, investment of funds, and finance in general.

FI 310 FINANCE I 3c-0l-3sh
Prerequisite: AG201, upper division only
Study of the methods of securing and managing funds on short, intermediate, and long-term bases. The financial analysis, planning, and control of a corporation.
Also covered is working capital management.

FI 312 RISK AND INSURANCE 3c-0l-3sh
Study of the hazards of underwriting, the principles involved in, and the protection provided by property and liability insurance, including multiple line and "all risk" insurance, and corporate suretyship.

FI 320 FINANCE II 3c-0l-3sh
Prerequisite: FI310, upper division only
Continuation of FI310 and covers topics on long-term external financing of the firm, capital budgeting, valuation of the firm, mergers, international business finance, and business failures.

FI 322 LIFE INSURANCE 3c-0l-3sh
Prerequisite: Upper division only
Comprehensive study of that insurance which provides protection against the economic loss caused by termination of earning capacity. Analysis benefits, underwriting, ratemaking, and legal doctrines.

FI 324 PRINCIPLES OF INVESTMENTS 3c-0l-3sh
Analysis of various types of securities and other forms of investment possibilities and a study of sound investment policies from a corporate viewpoint. Factors influencing the general movement of security prices and the return from investments are considered.

FI 385 SECURITIES AND COMMODITIES MARKETS 3c-0l-3sh
Prerequisites: Upper division only
Study of the structure of security and commodity markets; the nature of speculative transaction and methods of trading; analysis of pricing; and the objectives of security and commodity market regulation.

FI 410 FINANCIAL INSTITUTIONS AND MARKETS 3c-0l-3sh
Prerequisites: FI324, upper division only
Review of the entire structure of financial institutions, money, and capital markets, of which the business enterprise is both a supply and demand factor, and structure and dynamics of interest-rate movements.

FI 420 INVESTMENT ANALYSIS 3c-0l-3sh
Prerequisites: FI310, upper division only
Integrates the work of the various courses in the finance areas and familiarizes the student with the tools and techniques of research in the different areas of investments.

FI 422 SEMINAR IN FINANCE 3c-0l-3sh
Prerequisites: FI320, FI324, seniors only
Primarily for the senior Finance major, covers topics in all areas of finance by using recent articles, cases, discussions, speakers, and a financial simulation game.

FI 481 SPECIAL TOPICS IN FINANCE var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business.

FI 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of department chairperson and dean. Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

FI 493 FINANCE INTERNSHIP var 3 to 12 sh
Prerequisites: FI320, FI324, upper division only.
Practical experience in the finance field.

FL: STUDY ABROAD AND COMPARATIVE LITERATURE (FOREIGN LANGUAGE)

College of Humanities and Social Sciences

FL 100 STUDY ABROAD var 1-12sh
Registration mechanism and limited credit arrangement as provided in pre-approval process for Study Abroad programs coordinated through the Center for International Studies.

FL 391 SELECTED WORKS FROM THE MEDIEVAL PERIOD 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se and as representative of major themes of medieval European literature. This course is also listed as EN391.

FL 392 RENAISSANCE/BAROQUE/CLASSICAL 3c-0l-3sh
Prerequisites: EN101, 102
Literary works representing various genres from both periods are studied and compared for their themes, motifs, and stylistic features, applying principles set forth in H. Wolffin's "Renaissance and Baroque." This course is also listed as EN392.

FL 393 ROMANTICISM 3c-01-3sh
Prerequisites: EN101, 102
Study of the principal authors and works of late 18th century and early 19th century Europe and the unique national characteristics of the Romantic movement in lyric, drama, and prose. This course is also listed as EN393.

FL 394 NINETEENTH-CENTURY EUROPEAN NOVEL IN TRANSLATION 3c-01-3sh
Prerequisites: EN101, 102
A survey of major 19th-century European novels in translation (excluding English), emphasizing the rise of realism and naturalism and the cultural, historical, social, and artistic relationships between the various national literatures. This course is also listed as EN394.

FL 395 SELECTED WRITERS FROM 20TH-CENTURY EUROPE 3c-0l-3sh
Prerequisites: EN101, 102
Comparative study of selected works of major importance per se or as representatives of major trends in 20th-century literature. This course is also listed as EN395.

FL 396 THE LITERATURE OF EMERGING NATIONS 3c-0l-3sh
Prerequisites: EN101, 102
A comparative study of a selection of literature written in major European languages but originating in the nations of the developing world. Works will be mainly prose fiction (although essay, theater, and poetry may be included) and reflect a diversity of geographical, cultural, and prior colonial circumstances. This course is also listed as EN396.

FL 421 LANGUAGE AND SOCIETY 3c-0l-3sh
The student considers salient facts of language and its role in society and culture. Language families, linguistic change, and reciprocal influences of culture and language are presented.

FL 482 INDEPENDENT STUDY var-1 to 3sh
An opportunity to engage in an in-depth analysis of some topic dealing with an aspect of foreign languages through consultation with a faculty member. Permission required.

FN: FOOD AND NUTRITION

Department of Food and Nutrition
College of Human Ecology and Health Sciences

FN 101 INTRODUCTION TO HOSPITALITY MANAGEMENT 3c-0l-3sh
Introduction to the hospitality industry; aspects of serving the public, current management principles, operation of hospitality food and lodging facility.

FN 115 INTRODUCTION TO TOURISM 3c-0l-3sh
Analyze the economic and social impact of tourism, its promotion and implementation. Acquaint student with services needed by tourists, the role of the travel agent, and organizations pertaining to tourism.

FN 150 FOODS 3c-3l-4sh
Prerequisite: CH102 or concurrently
Basic principles of foods, to include composition, sanitation preparation, and preservation.

FN 212 NUTRITION 3c-0l-3sh
Prerequisites: CH102 or CH112, BI155 or concurrently
Sources and functions of nutrients and interdependence of dietary essentials and nutritive value of an optimum diet are studied. Attention given to varied conditions in human life.

FN 259 QUANTITY FOOD PURCHASING 3c-0l-3sh
Prerequisite: FN150
Includes sources, standards of quality, grades, methods of purchase, and storage of various foods. Emphasis on the development of purchasing policies and specifications.

FN 306 FOOD AND BEVERAGE SERVICE, SALES, AND MENU DESIGN 3c-0l-3sh
Prerequisites: FN150
Examines principles, processes, and theories of service, sales, promotion, and menu design as functions of the food and beverage department.

FN 312 MATERNAL, CHILDHOOD, AND ADOLESCENT NUTRITION 3c-0l-3sh
Prerequisites: HE218, FN212
A detailed study of nutrition during pregnancy and lactation, infancy, childhood, and adolescence, current issues and research as they impact on these developmental stages.

FN 313 QUANTITY FOOD PRODUCTION AND SERVICE 2c-varl-4sh
Prerequisites: FN150, 212. By permission only
A basic course in quantity food production with experience in planning, purchasing, preparing, and serving nutritionally adequate meals. Requirements of National School Lunch program emphasized in satellite and on-premises feeding.

FN 355 NUTRITION IN DISEASE I 3c-0l-3sh
Prerequisites: BI155, CH102, FN212
Basic tools for diet modification: food exchange systems, interviewing techniques, nutrition assessment, professional practice, dietary treatment of injury, surgery, recovery, obesity, and diabetes. Nutrition support. Food sampling experiences. Fall semester.

FN 356 FOOD SERVICE PERSONNEL AND ADMINISTRATION 3c-0l-3sh
Prerequisites: PC101, FN313
Organization and administration of food service business, including personnel policies, work simplification, training, communication, and safety.

FN 357 SPECIAL PROBLEMS IN FOODS 0c-4l-3sh
Prerequisite: FN150
Individual problems in foods investigated with emphasis on identified weaknesses in the student's knowledge of food.

FN 358 FOOD SERVICE EQUIPMENT AND LAYOUT 3c-0l-3sh
Prerequisite: FN313
Selection and layout of food service equipment in relation to production, work flow, and efficient management. Field trips permit investigation of a variety of layouts.

FN 360 LODGING AND FRONT OFFICE ADMINISTRATION 3c-0l-3sh
Prerequisites: AG201, CO200, and FN356
Developing and applying management skills in operational procedures assigned to the front office and front office personnel. Emphasis on guest-related functions using manual, machine-assisted, and computer-based procedures and relationship to other lodging departments.

FN 362 EXPERIMENTAL FOODS 2c-3l-3sh
Prerequisites: FN150, 212, and CH102, or CH112
The experimental study of foods, relating chemical and physical properties to reactions and processes occurring in food systems.

FN 364 METHODS OF TEACHING 3c-0l-3sh
Prerequisites: FN313 and 356 or concurrently
Current teaching techniques and resource materials in nutrition education emphasized. Both classroom teaching and on-the-job training programs are included.

FN 365 HOUSEKEEPING, MAINTENANCE, AND ENERGY MANAGEMENT 3c-0l-3sh
Prerequisites: FN356, FN360, BI232
Analyzes management principles related to the housekeeping and maintenance departments within a lodging establishment while also managing energy consumption in each area.

FN 399 COOPERATIVE EDUCATION 0sh
Prerequisites: Sophomore standing.
A program designed to combine classroom theory with practical application through job related experiences. Students are employed in dietetics, food science, food service, and lodging organizations with work focus which relates to their academic training and career objectives. The student is required to serve a minimum of alternating work experiences, only one of which may be a summer experience. For food and nutrition majors only.

FN 401 FOOD MANAGEMENT COST CONTROLS 3c-0l-3sh
Prerequisite: FN356
Food, beverage, and labor cost controls for restaurants, school lunch programs, and health care feeding facilities are studied, including relationships between budgetary information and managerial decision making in large food service operations.

FN 402 COMMUNITY NUTRITION 3c-0l-3sh
Prerequisite: FN212
Nutritional implications of both good and poor nutrition-for all age groups in home and community situations are studied. Corrective and preventive measures emphasized. Spring semester.

FN 406 CATERING MANAGEMENT var-3sh
Prerequisites: FN313, senior majors only.
Profitable organization, preparation, and service of catered food both on and off the premises is main focus of course. Off-campus experience included.

FN 408 INSTITUTIONAL FOOD SERVICE MANAGEMENT 3c-0l-3sh
Prerequisites: FN313, 356, 358, AG201
A compendium of the concepts of managing personnel, money materials, machinery, and markets as related to different types of food service systems. The focus will be on problem identification and resolution at the managerial level.

FN 410 FOOD, NUTRITION, AND AGING 3c-0l-3sh
Prerequisite: Junior status
Relationship of food to health maintenance and special dietary problems during the middle and later years.

FN 411 SEMINAR IN FOOD SERVICE AND LODGING 3c-0l-3sh
Prerequisites: FN360, FN365
Analysis of current trends and practices within the food service and lodging industry and their relation to academic studies, as presented by faculty and industry leaders.

FN 420 CONVENTION SALES AND SERVICES 3c-0l-3sh
Prerequisites: MK320, AD235, and FN306
A study of the types of organizations that hold conventions, the people who select the sites, and types of facilities needed. Includes analyzing a property to determine which market to seek and staffing techniques to ensure repeat business.

FN 433 EDUCATIONAL STUDY TOUR IN FOODS var-2 to 6sh
Comprehensive program of directed activities permits firsthand knowledge of growing, processing, marketing, and preparation of foods. The historical and cultural aspects of food are studied. Visits to food markets, catering schools, famous restaurants, etc., are included.

FN 444 FOOD COMPOSITION AND BIOCHEMISTRY 3c-0l-3sh
Prerequisites: CH355
Basic chemistry and biochemistry of essential components of food originating from plant and animal sources.

FN 447 NUTRITIONAL ASPECTS OF FOOD TECHNOLOGY 3c-0l-3sh
Prerequisites: FN212 and BI232; junior status
Study of current known effects of food processing techniques on the nutritional value and safety of foods.

FN 451 MAN AND FOOD 3c-0l-3sh
Prerequisite: PC101 or SO151 or AN110
Exploration of the economic, biological, psychological, social, and aesthetic significance of food for individuals, families, and society. Taught as a research and seminar class. Recommended as an elective for all students.

FN 455 NUTRITION IN DISEASE II 3c-0l-3sh
Prerequisite: FN355
Dietary treatment of disorders of the gastrointestinal, renal, cardiovascular, and hepatic systems; inborn errors of metabolism; allergies; cancer. Therapeutic quackery. Food sampling experiences. Spring semester only.

FN 458 ADVANCED HUMAN NUTRITION 3c-0l-3sh
Prerequisites: CH351 or 355 or, concurrently, FN212, BI155
In-depth study of the nutrients and their functions within the cell. Incorporation of the principles of physiology and biochemistry in the study of nutrition. Emphasis on current research and evaluation of research methodology.

FN 461 MICROWAVE COOKING TECHNOLOGY 2c-2l-3sh
Prerequisite: CH101
Study of the electronic technology, selection, care, and use of the microwave oven. Basic physical and chemical concepts related to microwave cooking are included. Individual investigative research problems are required.

FN 462 ADVANCED EXPERIMENTAL FOODS 1c-4l-3sh
Prerequisites: FN362, CH231
An experimental approach to the many factors influencing the chemical and physical properties of food. Use of the scientific method in developing an individual project combining an evaluation of current literature and appropriate sensory and analytical methodology.

FN 463 NUTRITION COUNSELING 2c-0l-3sh
Prerequisites: FN355, PC101, FN455 or concurrently
Use of intervention strategies in prevention and treatment of disease through diet. Supervised practicum (3 hours per week) counseling clientele in normal and therapeutic nutrition.

FN 464 FOOD AND NUTRITION RESEARCH METHODS 3c-0l-3sh
Prerequisites: FN362, 458, CH351, and MA217
Introduction to research methodology in foods and nutrition. Includes theory and techniques of physical, chemical, and instrumental analysis. Applications of these methods to food and animal models with statistical analysis of data.

FN 482 INDEPENDENT STUDY var-1-6sh
Prerequisite: Must have earned 60 semester hours
Opportunity to pursue special interests beyond the scope of regular class offerings. Permission of instructor and approval of department chairperson required. (Undergraduate maximum is 12 semester hours.) Must apply for Independent Study a semester in advance.

FN 484 SENIOR SEMINAR 1c-0l-1sh
Prerequisites: Senior status, FN458, FN464 or concurrently
Emphasis on individual review of food and nutrition literature with formal presentation and discussion of current research.

FN 493 INTERNSHIP IN FOOD AND NUTRITION var-2-12sh
Prerequisite: Must have earned 57 semester hours
An opportunity for students to work away from the university in supervised job situations at health care facilities, restaurants, or other institutional food service or lodging establishments. Objective is to provide students with job-related experiences. Must meet university internship requirements.

NOTE: White uniforms including white shoes are required for all lab courses where food is prepared. Students must meet the professional dress requirements of the department.

FR: FRENCH

Department of French
College of Humanities and Social Sciences

FR 101 INTENSIVE ELEMENTARY FRENCH 6sh
Student completes sequence in one semester (6 sh). Using Dartmouth Intensive Language Model(DILM), sections emphasize mastery of spoken language as well as basic language skills.

FR 151 FRENCH I 3c-0l-3sh
For beginning students. Vocabulary development, pronunciation, simple phrases written and oral, most common verb structures and grammatical principles explained. Introduction to French daily life and customs. Placement by exam during the first week of course; attendance is required.

FR 152 FRENCH II 3c-0l-3sh
Second part of first-year language sequence. Reflexive verbs, direct and indirect object pronouns, use of the subjunctive and use of the imparfait are among the grammar points covered. Placement by exam during first week of course; attendance required.

FR 151-2 ACCELERATED FRENCH I AND II 6c-0l-6sh
By attending classes 6 hours each week, the student completes the elementary sequence (6 credits) in one semester. The intensive sections present the same basic language skills that are taught in the regular FR 151-152 classes with a slightly greater emphasis on the mastery of the spoken language.

FR 201 INTENSIVE INTERMEDIATE FRENCH 6sh
Student completes sequence in one semester (6 sh). Using Dartmouth Intensive Language Model(DILM), students develop language skills with emphasis on oral competency.

FR 221 CONVERSATION III 2c-0l-2sh
This course gives the students the opportunity of practicing the grammatical knowledge they acquire in a corresponding class and develop their oral skill. The course stresses phonetics, pronunciation, and vocabulary.

FR 222 CONVERSATION IV 2c-0l-2sh
This course continues the study of phonetics to improve the students' pronunciation. Readings of relatively short texts followed by questions and answers. Some informal conversation to increase the vocabulary, to be able to react spontaneously to a given situation, and carry the oral skill to a higher level.

FR 251 FRENCH III 3c-0l-3sh
This course is oriented toward both review and development of the four language skills. Students cover the elements for basic communication and progress to more difficult grammar concepts: verb tenses, pronouns, subjunctive. Each student practices the use of these grammar concepts in creative communication.

FR 252 FRENCH IV 3c-0l-3sh
This course continues the training in the language skills by reviewing basic elements and adding more complex factors such as the usage of compound tenses and structures in the correct relationship, such as time, cause, and consequence. A relatively short literary work will be studied in its entirety and in the original version.

FR 251-2 ACCELERATED FRENCH III AND IV 6c-0l-6sh
By attending class 6 hours each week, the student completes the intermediate sequence (6 credits) in one semester. The intensive sections continue to develop basic language skills with a slightly greater emphasis upon the mastery of the spoken language.

FR 253 INTERMEDIATE COMPOSITION AND CONVERSATION 3c-0l-3sh
Intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to FR 252 for majors or serious students.

FR 254 COMMERCIAL FRENCH 3c-0l-3sh
Prerequisite: FR 252 or equivalent
Commercial letter writing, use of technical language, survey of special business practices and methods of French-speaking commercial systems, and problems of translation are studied.

FR 255 THE ART OF TRANSLATION (VERSION) 3c-0l-3sh
Prerequisite: FR 252 or equivalent
Practice in the skills needed to translate from the foreign language into English. Students will analyze problems of translation as they occur in scientific, business, journalistic, and literary texts.

FR 321-322 ADVANCED CONVERSATION I AND II each 1c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetition of these relatively informal courses.

FR 351-352 ADVANCED FRENCH I AND II each 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language; frequent themes required.

FR 361-362 DEVELOPMENT OF FRENCH CULTURE AND LITERATURE I AND II each 3c-0l-3sh
A comprehensive, chronological study of French political, social, and economical history throughout the centuries, concomitant to a study of the development of French art and the various literary genres.

FR 363 MEDIEVAL AND RENAISSANCE LITERATURE 3c-0l-3sh
A study of the major literary works of the period, beginning with the Chansons de gestes and emphasizing the evolution of ideas and the various literary genres.

FR 365 SEVENTEENTH CENTURY FRENCH LITERATURE 3c-0l-3sh
A study of the major baroque and neoclassical works in poetry, theater, and prose with special attention to the evolution of ideas and the French moralist tradition.

FR 366 EIGHTEENTH-CENTURY FRENCH LITERATURE 3c-0l-3sh
A study of the Age of Enlightenment in its principal authors and works, including the popularization of ideas for and by secondary authors; a survey of the century's intellectual and literary crosscurrents in French literature and the wider scope of foreign influences.

FR 367 NINETEENTH-CENTURY FRENCH LITERATURE 3c-0l-3sh
A study of the literature of 19th century France with particular attention to the development of the novel while also treating the genres of poetry and theater. Attention is given foreign influences and correlations.

FR 368 TWENTIETH-CENTURY FRENCH LITERATURE 3c-0l-3sh
A survey of the poetic, theatrical, and narrative genre of the French 20th century with emphasis on the interaction between philosophical development and literary expression.

FR 371 THE FRENCH NOVEL 3c-0l-3sh
Elective survey of the origin and development of the French novel. A selected list of works representative of major genres are read in their entirety.

FR 372 STUDIES IN CONTEMPORARY FRENCH LITERATURE 3c-0l-3sh
Content of this course will vary in accordance with needs and interests of those who elect it.

FR 461 STRUCTURES OF FRENCH AND ENGLISH 3c-0l-3sh
Modern methods of linguistic analysis applied to a study of French syntax. Transformational, distributional, and traditional models serve to explain mechanisms of the language with a pedagogical intent.

FR 481 SPECIAL TOPICS var-1 to 3sh
Designed to meet special needs of a student group.

FR 482 INDEPENDENT STUDY var-1 to 3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the French language and culture through consultation with a faculty member. Permission required.

FR 493 INTERNSHIP var-3 to 12sh
Prerequisite: One semester of study in France
A supervised field experience in France with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals.
For more information, contact the director of the Internship Abroad Program.

GE: GEOGRAPHY

Department of Geography and Regional Planning
College of Humanities and Social Sciences

GE 101 WORLD GEOGRAPHY: MAN AND ENVIRONMENT 3c-0l-3sh
Study of man's relationship with the earth accomplished through study of physical, cultural, economic, and demographic factors.

GE 102 GEOGRAPHY OF UNITED STATES AND CANADA 3c-0l-3sh
The cultural landscape of North America is studied. The relationship between man and environment is examined and spatial patterns of environment, economy, society, and politics are considered.

GE 230 CULTURAL GEOGRAPHY 3c-0l-3sh
May be taken in place of GE 101.
Introduction to cultural geography, including population, settlement, historical, urban, and political geography, human relationships with the natural environment, and the literature and methods of cultural geography.

GE 231 ECONOMIC GEOGRAPHY 3c-0l-3sh
Introduction to geographic concepts, methods, and skills related to spatial patterns of production, consumption, and exchange over the earth's surface.

GE 241 PHYSICAL GEOGRAPHY 3c-0l-3sh
Introduction to physical geography including the study of weather, climate, soils, vegetation, landforms, energy cycles, and the hydrologic cycle.

GE 251 GEOGRAPHY OF PENNSYLVANIA 3c-0l-3sh
Regions of Pennsylvania are examined in detail to identify man-environment relationships. Soils, topography, climate, vegetation, population, and economic patterns are studied.

GE 252 GEOGRAPHY OF LATIN AMERICA 3c-0l-3sh
Impact of rapid population growth and economic development on the environment and spatial organization of Latin America are considered. The resource base and cultural heritage of the region are studied.

GE 253 GEOGRAPHY OF EUROPE 3c-0l-3sh
Investigates relationships underlying land use, dominant international problems, boundary disputes, and regional complexes of the European continent.

GE 254 GEOGRAPHY OF USSR 3c-0l-3sh
Regions of the Soviet Union, natural resources, cultural patterns, population, strategic areas, and geopolitical problems are studied.

GE 255 GEOGRAPHY OF AFRICA 3c-0l-3sh
Systematic survey of the physical, economic, political-historical, and cultural geography of the continent is followed by regional studies of countries and peoples in Africa, south of the Sahara.

GE 256 GEOGRAPHY OF EAST ASIA 3c-0l-3sh
Studies China, Japan, Korea, Outer Mongolia, Taiwan. Geographic background for development and wise use and restoration of natural resources are dealt with.

GE 257 GEOGRAPHY OF SOUTH AND SOUTHEAST ASIA 3c-0l-3sh
India, Pakistan, Bangladesh, Sri Lanka, Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, and Indonesia are studied with special attention to regional similarities and differences, particularly as they pertain to human adjustment.

GE 312 RESEARCH IN GEOGRAPHY AND PLANNING 3c-0l-3sh
Introduction to the basic elements of research in the context of orderly scientific investigation. Emphasizes the application of research methodology to specific geographic and planning problems.

GE 313 CARTOGRAPHY 3c-0l-3sh
Gives an understanding of the compilation and use of maps and develops an ability to construct various types of maps.

GE 314 MAP AND PHOTOGRAPH INTERPRETATION 3c-0l-3sh
Maps and air photographs, along with remote sensing materials, permit inventory and analysis of geologic, land use, urban development, and other landscape phenomena. The understanding of these materials and associated tools for their use is presented.

GE 331 POPULATION GEOGRAPHY 3c-0l-3sh
Spatial variations in numbers, characteristics, and dynamics of human population, models, and theoretical constructs relevant to demographic structures and processes are studied, as well as major world and regional problems.

GE 332 URBAN GEOGRAPHY 3c-0l-3sh
Basic principles of urban geography including site, situation, function, urban land use, urban structure, and urban hierarchy are introduced. Relationships between urban geography and urban planning are explored.

GE 333 TRADE AND TRANSPORTATION 3c-0l-3sh
Deals with the spatial aspects of transportation systems and their use. Circulation, accessibility, time and distance concepts, and trade patterns are discussed.

GE 334 POLITICAL GEOGRAPHY 3c-0l-3sh
Geographic factors and conditions are analyzed as they relate to the character and function of states. Political institutions are evaluated in light of geographic conditions.

GE 335 GEOGRAPHY OF ENERGY 3c-0l-3sh
Energy production and consumption in human societies through time are considered to provide the background necessary for understanding contemporary problems. Emphasis is on locational and environmental aspects of energy in the United States.

GE 336 SOCIAL GEOGRAPHY 3c-0l-3sh
Spatial dimensions of the American society is the focus of this course. The distribution of various social groups and their impact on the landscape are considered.

GE 337 HISTORICAL GEOGRAPHY 3c-0l-3sh
Studies of past geographies, geographical change through time, and historical perspectives on the cultural landscape are included. Historical geography of the United States is emphasized.

GE 341 CLIMATOLOGY I 3c-0l-3sh
The elements of weather and climate and the climatic regions of the earth are studied in relation to other aspects of the physical and biological environment.

GE 342 PHYSIOGRAPHY 3c-0l-3sh
The study of landforms and water features is the focus of this course. Types, distribution, and processes of formation are considered in relationship to the human landscape.

GE 360 INTRODUCTION TO PLANNING 3c-0l-3sh
Introduction to field of planning on city, metropolitan, regional, and county levels. Included are intergovernmental context and legislative basis for planning; the comprehensive plan; plan implementation and the planning agency.

GE 361 PLANNING: BASIC STUDIES AND ANALYSIS 3c-0l-3sh
Prerequisite: GE 360
Research, analytical design, and plan-making techniques in urban and regional planning. Examines basic items necessary to prepare urban and regional comprehensive plans.

GE 371 AEROSPACE WORKSHOP 3c-0l-3sh
Develops an appreciation and provides information related to aerospace activities and contributions; offers background for teaching aerospace courses; discusses aviation/space careers; and presents the basic principles of flying (usually including some flight instruction).

GE 411 GEOGRAPHY: THOUGHT AND PHILOSOPHY 3c-0l-3sh
Seminar limited to junior and senior majors with at least 12 semester hours in geography. Deals with history of the discipline, great ideas, leading problems, and unresolved issues.

GE 415 REMOTE SENSING 3c-0l-3sh
Deals with air photographs, satellite imagery, thermal sensing, radar imagery, and their application to deriving information about the Earth's physical and cultural landscapes.

GE 431 GEOGRAPHY OF AMERICAN INDIANS 3c-0l-3sh
The historical/cultural geography of Native Americans is the focus. Population, resources, land use, development, settlement patterns, and other selected topics are covered.

GE 432 GEOGRAPHY OF CRIME 3c-0l-3sh
The geographical context of crime is examined from historical and contemporary viewpoints. Relevant concepts and analytical approaches are introduced.

GE 440 CONSERVATION: ENVIRONMENTAL ANALYSIS 3c-0l-3sh
Problems of exploitation and utilization of regional resources such as soils, minerals, forests, and wildlife are considered in relation to population growth and regional planning and development.

GE 462 PLANNING: DEVELOPMENT, PRINCIPLES, AND THEORY 3c-0l-3sh
Prerequisite: GE 360
Examines the process of city planning during ancient, medieval, Renaissance, and modern periods. A review of early planning in America, as well as present city planning is included.

GE 463 PLANNING: DESIGN 3c-0l-3sh
Prerequisite: GE 360
Presents concepts of city, subdivision, and transportation design in relation to topography, natural resources, and other physical elements.

GE 464 LAND USE POLICY 3c-0l-3sh
Basic concepts of land use policy at the national, regional, county, and local levels are treated. Analysis is made of various land use policies.

GE 481 SPECIAL TOPICS var-3sh
Topical courses offered on an experimental basis. Check department schedule for these offerings.

GE 493 INTERNSHIP var-3 to 12sh
Professional learning experience with emphasis on application of academic background. Open to majors and minors in geography and regional planning with 75 semester hours and 15 semester hours in the department, respectively. See internship supervisor for additional information.

GE 499 INDEPENDENT STUDY var-3 to 6sh
Independent research and study under faculty direction. Interested students should approach department chairperson for information.

GK: GREEK

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

GK 151 GREEK I 3c-0l-3sh
For beginning students; pronunciation, reading, oral, and written communication are the objectives. In grammar the case system of the Greek noun is begun.

GK 152 GREEK II 3c-0l-3sh
Continuation of Greek I. In grammar the case system of the Greek noun is completed.

GK 251 GREEK III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for optics of interest. In grammar most tenses of the Greek verb are studied.

GK 252 GREEK IV 3c-0l-3sh
Continuation of Greek III. In grammar more tenses of the verb are studied. The readings become short selections from Greek literature.

GK 351 ADVANCED GREEK LANGUAGE I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. While themes are not required, selections from Greek prose are read both for knowledge of their content and for developing knowledge of the structure of the language.

GK 352 ADVANCED GREEK LANGUAGE II 3c-0l-3sh
Continuation of Greek 351. Selections are from poetry this semester.

GK 482 INDEPENDENT STUDY var-3sh
An opportunity to engage in an in-depth analysis of some topics dealing with the Greek language and culture through consultation with a faculty member. Permission required.

GM: GERMAN

Department of German
College of Humanities and Social Sciences

GM 101 INTENSIVE ELEMENTARY GERMAN var-6sh
Student completes sequence in one semester (6 sh). Using Dartmouth Intensive Language Model (DILM), sections emphasize mastery of spoken language as well as basic language skills. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

GM 121 CONVERSATION I 2c-0l-2sh
Two hours weekly conversational practice in small groups to improve pronunciation and oral proficiency. Must take concurrently or have had previously GM 151 or its equivalent to enroll in the course.

GM 122 CONVERSATION II 2c-0l-2sh
Two hours weekly conversational practice in small groups to improve fluency and ability to speak in small-group settings. May enroll without having had GM 121, but must be taking concurrently or have had GM 151 or its equivalent.

GM 151 GERMAN I 3c-0l-3sh
For beginners, the objectives include grammar, pronunciation, reading, speaking, and writing.

GM 152 GERMAN II 3c-0l-3sh
For students who have had German I or its equivalent, the objectives are to enhance and develop the four skills of listening, speaking, reading, and writing.

GM 151-2 ACCELERATED GERMAN I AND II each 3c-0l-3sh
By attending class six hours each week, the student completes the elementary sequence (6 credits) in one semester. The intensive sections present the same basic language skills that are taught in the regular GM 151-152 classes with slightly greater emphasis on the mastery of the spoken language. Majors take 051 and 052 concurrently.

GM 201 INTENSIVE INTERMEDIATE GERMAN var-6sh
Student completes sequence in one semester (6sh). Using Dartmouth Intensive Language Model (DILM), students develop language skills with emphasis on oral competency. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

GM 221 CONVERSATION III 2c-0l-2sh
Two hours weekly conversation practice in small groups emphasizing the use of greetings, idiomatic expressions, and communication skills to improve vocabulary and pronunciation.

GM 222 CONVERSATION IV 2c-0l-2sh
Two hours of weekly conversation designed as a continuation of the practice in small groups, focusing on speaking and listening skills and on participation in discussions and dialogues. May enroll without having taken GM 221.

GM 251 GERMAN III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics of interest.

GM 252 GERMAN IV 3c-0l-3sh
Continuation of German III with some emphasis on literary works.

GM 251-2 ACCELERATED GERMAN III AND IV each 3c-0l-3sh
By attending class six hours each week, the student completes the intermediate sequence (6 credits) in one semester. The intensive sections continue to develop basic language skills with a slightly greater emphasis upon the mastery of the spoken language.
Majors take 221-222 (or 121-122) concurrently.

GM 253 INTERMEDIATE COMPOSITION AND CONVERSATION 3c-0l-3sh
Can be taken instead of or in addition to 252. Designed for majors or serious students. Offered in spring only.

GM 254 BUSINESS GERMAN 3c-0l-3sh
Prerequisite: GM 251 or equivalent
A one-semester course which can be taken instead of, or in addition to, GM252 by students interested in business or as part of the General Education requirement (equivalent to German IV). Business practices and specialized business vocabulary, letter writing and problems of translation are emphasized.

GM 256 SCIENTIFIC GERMAN 3c-0l-3sh
Designed to substitute for German 252, will be offered in the second semester. Primarily for science majors, it may be taken as an elective by German majors.

GM 321-322 ADVANCED CONVERSATION I AND II each 2c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetitions of these relatively informal courses.

GM 351 ADVANCED GERMAN LANGUAGE I 3c-0l-3sh
The aim of this course is to review and expand the student's grammatical skills and to apply these skills to extensive cultural and short literary readings and to write frequent themes on these readings.

GM 352 ADVANCED GERMAN LANGUAGE II 3c-0l-3sh
This course will continue to expand the student's grammatical skills and to apply them by writing longer themes based on cultural and literary readings.

GM 361 DEVELOPMENT OF GERMAN CULTURE AND LITERATURE I 3c-0l-3sh
Designed to provide a background in German literature, music, art, architecture, and history. Surveys the period from the migrations of the Germanic tribes to the rise of Prussia as a European power.

GM 362 DEVELOPMENT OF GERMAN CULTURE AND LITERATURE II 3c-0l-3sh
A continuation of GM 361. Covers the period from the French Revolution and its effects on Germany up to the present, with an emphasis on German literature, history, and music.

GM 363-364 INTRODUCTION TO GERMAN LITERATURE I AND II each 3c-0l-3sh
Selected readings in German poetry, drama, and fiction, to acquaint student with some techniques for intelligent understanding and formal criticism of works of literature.

GM 367 NINETEENTH-CENTURY GERMAN LITERATURE 3c-0l-3sh
A survey of the major works of German poetry and prose with an emphasis on the literary movements of Romanticism, Realism, and Naturalism.

GM 368 TWENTIETH-CENTURY GERMAN LITERATURE 3c-0l-3sh
A study of representative works of German poetry and prose from Expressionism through World War II.

GM 369 CONTEMPORARY GERMAN LITERATURE 3c-0l-3sh
A study of the literary achievement of postwar Germany up to the present.

GM 370 THE AGE OF GOETHE I 3c-0l-3sh
A study of representative works from the Enlightenment and Storm and Stress periods.

GM 371 THE AGE OF GOETHE II 3c-0l-3sh
A study of selected works of German Classicism with an emphasis on the prose and poetry of the first decades of the 19th century.

GM 381 GERMAN DRAMA IN ENGLISH TRANSLATION 3c-0l-3sh
Representative works of major dramatists in English translation. Primarily intended for students of English literature or comparative literature and not considered as credit toward a German major.

GM 391 SPECIAL PROJECTS IN GERMAN LITERATURE var-1 to 3sh
Devoted to a special aspect of German language or literature. May be arranged for individual or group study. Permission of department required.

GM 410 HISTORY OF THE GERMAN LANGUAGE 3c-0l-3sh
History and development of German Language, with special emphasis on relationships with English. Analysis of annals in Gothic, Old High German, and Middle High German using methods of historical and contemporary linguistics.

GM 481 SPECIAL TOPIC var-1 to 3sh
Designed to meet the special needs of a student group.

GM 482 INDEPENDENT STUDY var-1 to 3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the German language and culture through consultation with a faculty member. Permission required.

GM 493 INTERNSHIP IN GERMANY var-3 to 12sh
Prerequisite: German 352 or equivalent
A supervised field experience in Germany with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and degree of proficiency in the German language. Academic work at the Gesamthochschule in Duisburg may precede or follow the Internship. Open to students in other disciplines, such as Political Science, International Relations, Business, etc., with their adviser's approval.

GS: GEOSCIENCE

Department of Geoscience
College of Natural Sciences and Mathematics

GS 101 EARTH SCIENCE: GEOLOGY AND OCEANOGRAPHY 3c-0l-3sh
A nonmathematical treatment of introductory oceanography and geology designed specifically for nonscience majors.

GS 102 EARTH SCIENCE: GEOLOGY AND OCEANOGRAPHY LAB 0c-2l-1sh
Should be taken concurrently with GS 101
Lab experiences in various aspects of oceanography and geology. Includes field trip(s).

GS 103 EARTH SCIENCE: METEOROLOGY AND ASTRONOMY 3c-0l-3sh
No prerequisite
The earth's upper environment is studied by focusing on the effects of the atmosphere and the earth's place in the universe on the daily lives of man.

GS 104 EARTH SCIENCE: METEOROLOGY AND ASTRONOMY LAB 0c-2l-1sh
Should be taken concurrently with GS 103
Use of the weather station and the planetarium highlight the series of exercises designed to aid students in developing meaningful concepts about their ability to understand and, in the future, control their place in the universe.

GS 110 GENERAL ASTRONOMY 2c-2l-3sh
Specifically designed to introduce students to discipline of astronomy; emphasis placed on study of planets, space program, constellations, and Milky Way. No science or math majors except those completing general science certification requirements.

GS 121 GENERAL GEOLOGY I 3c-0l-3sh
Introduction to science of earth; properties and processes of earth's interior and crust and their interaction with surface processes to shape and modify man's physical environment.

GS 122 GENERAL GEOLOGY I LABORATORY 0c-3l-1sh
Should be taken concurrently with GS 121
Identification of common minerals and rocks; introduction to topographic and geologic maps, to land forms, and to geologic structures. Includes field trips.

GS 131 GENERAL GEOLOGY II 3c-0l-3sh
Prerequisite: GS 121 or permission of instructor
Introduction to the history of the earth, its physical changes and sequences of configuration, and record of biological evolution.

GS 132 GENERAL GEOLOGY II LABORATORY 0c-3l-1sh
Should be taken concurrently with GS 131
Selected problems in geologic map interpretation, paleontology, and stratigraphic rock sequences. Includes field trips.

GS 321 MINERALOGY 2c-3l-3sh
Prerequisite: GS 121 or CH 111
Concerned with properties of minerals; introduction to crystalography and chemistry of crystals, followed by a determination of minerals and their probable genesis. Includes field trips which may occur on weekends.

GS 322 IGNEOUS AND METAMORPHIC PETROLOGY 2c-3l-3sh
Prerequisite: GS 321
Concerned with a description of igneous and metamorphic rock character based upon mineral components and physical relationship between mineral components of a rock. Includes field trips which may occur on weekends.

GS 324 GLACIAL GEOLOGY 2c-3l-3sh
Prerequisites: GS 121 and GS 131
Study of origin and development of all features resulting from action of glaciers. Includes field trips which may occur on weekends.

GS 325 STRUCTURAL FIELD GEOLOGY I 2c-3l-3sh
Prerequisites: GS 131 and 132 or permission of instructor
Study of primary structure, contacts, folds, joints, and faults. Mechanical principles. Includes work with geologic maps, structure sections, Brunton compass, and stereographic projections. Includes field trips which may occur on weekends.

GS 326 STRUCTURAL FIELD GEOLOGY II 2c-3l-3sh
Prerequisite: GS 325
Study of cleavage, foliation, lineation, and oriented structures. Techniques of geologic field work with Brunton compass, aerial photographs, and rock color charts. Includes a field project involving compilation of measured and described stratigraphic section(s), a geologic map, structure sections, and field report. Includes field trips which may occur on weekends.

GS 327 GEOMORPHOLOGY 2c-3l-3sh
Prerequisites: GS 121 and GS 131
A study of the origin of the earth's land forms, including relationship of geologic structure to landform types and role of geomorphic processes in landscape development. Includes field trips which may occur on weekends.

GS 330 PALEONTOLOGY 2c-3l-3sh
Prerequisite: GS 131 or permission of instructor
Study of the morphology, evolution, geologic significance, and paleoecology of fossil organisms. Includes field trips which may occur on weekends.

GS 335 ECONOMIC GEOLOGY 2c-3l-3sh
Prerequisite: GS 321
Deals with location and probable origin of fossil fuels, ores of the nonmetals, and metallic ores, both ferrous and nonferrous. Includes field trips which may occur on weekends.

GS 336 GEOLOGY OF THE NORTHERN ROCKIES var-3sh
Prerequisite: Permission of instructor
A field study of the major geologic features and relationships involved in the development of the northern Rocky Mountains, National Park and Monument areas of South Dakota, Wyoming, and Montana are included among the areas investigated. (3 weeks, summer only)

GS 341 SOLAR SYSTEM 2c-3l-3sh
Prerequisites: MA 121 and PY 111
Fundamentals of astronomy, with emphasis on observational methods, mechanics, and origin of the solar system and spatial relationship of the solar system to the other members of the universe.

GS 342 STELLAR ASTRONOMY 2c-3l-3sh
Prerequisites: MA 121 and PY 111
Fundamentals of astronomy, with emphasis on sun, stars, galaxies, the sidereal universe, and use of spectroscopy for gathering astronomical data.

GS 350 OPERATION OF THE PLANETARIUM var-1sh
Prerequisites: GS 110 or 341 or 342 or permission of instructor
Designed to acquaint the student with methods of operation and repair of a Spitz A-3-P planetarium. Content includes topics suitable for lectures to various age groups. Student will write and present a demonstration program. Meets once a week with occasional evening observations.

GS 361 PHYSICAL OCEANOGRAPHY 2c-3l-3sh
Prerequisites: PY 111 and MA 121 or permission of instructor
Introduction to physical, chemical, geological, and biological nature of ocean: topography, submarine geology, and bottom deposits. Includes field trip(s) which may occur on weekend(s).

GS 362 MARINE GEOLOGY AND PLATE TECTONICS 2c-3l-3sh
Prerequisites: Physics I and II, 14sh of Geology courses
A study of marine geology, coastal geomorphology, marine sedimentary environments, and plate tectonics examined in the light of sea floor spreading and other oceanographic evidences.

GS 371 METEOROLOGY I 2c-3l-3sh
Prerequisite: One year of Physical Science or Physics
Introduction to meteorological sciences; composition and structure of the atmosphere; radiation principles; elementary thermodynamics and heat balance.

GS 372 METEOROLOGY II 2c-3l-3sh
Prerequisite: GS 371 or permission of instructor
Introduction to physical, dynamical, and theoretical meteorology.

GS 411 SEDIMENTARY PETROLOGY 2c-3l-3sh
Prerequisite: GS 321 or permission of instructor
Study of sediments and sedimentary rocks with emphasis on interpreting ancient environments of deposition utilizing sieve analysis, hand lens, and petrographic microscope. Includes field trips which may occur on weekends.

GS 412 STRATIGRAPHY 2c-3l-3sh
Prerequisite: GS 411 or permission of instructor
Principles and processes involved in development and description of stratified rock sequences, principles and problems of correlation, and selected stratigraphic problems. Includes field trips which may occur on weekends.

GS 420 GEOLOGY OF PENNSYLVANIA 2c-3l-3sh
Prerequisite: 17sh geology courses or written permission of instructor
An advanced course dealing with many varied aspects of Pennsylvania geology, including the structure, stratigraphy, and geologic history of its varied geologic provinces. Includes field trips which may occur on weekends.

GS 432 COAL GEOLOGY var 1-3sh
Prerequisites: 8sh in geology or permission of instructor
An introduction to the geology of coal, its occurrence, origin, organic and inorganic constituents, environments of deposition, coal mining, and a detailed description of coal stratigraphy in the eastern and central United States. Includes field trips which may occur on weekends.

GS 440 SUBSURFACE GEOLOGY 2c-3l-3sh
Prerequisite: Minimum 20 credit hours of Geology
An introduction to the geology of petroleum, its origin, migration, entrapment, and production. Lab is designed to provide practical experience in subsurface mapping techniques and the use and evaluation of geophysical logging devices. Includes field trips which may occur on weekends.

GS 441 CARBONATE GEOLOGY-FLORIDA var-3sh
Prerequisite: 17sh geology courses or written permission of instructor
Two to three weeks of field study in Florida Keys. Course will be conducted from base camp in Florida Keys and will consist of both land and water work as the different carbonate environments in the Keys, Florida Bay, and in the Atlantic reef tract are studied.

GS 480 GEOSCIENCE SEMINAR var-1sh
For seniors majoring in some aspect of geoscience. The seminar (1) provides the student with an opportunity to prepare, formally present, and defend a scientific paper based either on his/her own research or on a topic chosen with the approval of instructor, (2) provides opportunity to discuss topics presented by other students, faculty, or guests.

GS 481 SPECIAL TOPICS var-1 to 3sh
Prerequisite: Permission of instructor
It is the department's intention to use this course to schedule extended field trips and for teaching special courses which will utilize the specialties of the geoscience faculty.

GS 482 INDEPENDENT STUDY var-1 to 3sh
Independent study provides the student with an opportunity to use library, laboratory, or field research in an area which is of interest to him under the supervision of a designated faculty member.

GS 493 INTERNSHIP var-1 to 3sh
Summer work experiences with cooperating firms or agencies. May be scheduled only after consultation with adviser and chairperson. Restricted to junior and senior Geoscience Department majors.

HE: HOME ECONOMICS EDUCATION

Department of Home Economics Education
College of Human Ecology and Health Sciences

HE 218 CHILD DEVELOPMENT 3c-0l-3sh
Prerequisite: PC 101
Focuses on the normal development and behavior of children. Survey made of physical, emotional, social, and intellectual development of children from conception through early adolescence. Pertinent child development research analyzed.

HE 224 MARRIAGE AND FAMILY RELATIONS 3c-0l-3sh
Prerequisite: PC 101
Focuses on preparation for marriage and principles of human relations basic to marital adjustment. Influence of community and family experiences on personal development and adjustment explored.

HE 250 INTRODUCTION TO TEACHING VOCATIONAL HOME ECONOMICS EDUCATION 3c-0l-3sh
Overview of philosophy and organization of home economics profession and the role of home economics teachers. Opportunities for planned observations and varied teaching experiences using a variety of resource materials are provided. Self-evaluation relative to desirable teacher competencies is stressed.

HE 317 INFANT DEVELOPMENT 3c-0l-3sh
Prerequisite: HE 218
Study of characteristic developmental changes of human infants from birth to approximately 2 1/2 years.

HE 318 TOPICS IN PRESCHOOL EDUCATION 3c-0l-3sh
Prerequisite: HE 218
Students learn about preschool children and child development centers through direct observation, examine creative methods, and develop creative activities for preschool children. Students examine classroom techniques and procedures necessary for integrating "special needs" preschoolers into the normal preschool setting.

HE 320 TEACHING IN CHILD DEVELOPMENT CENTERS 1c-4l-3sh
Prerequisite: HE 218 or equivalent
Techniques for planning and teaching preschool children. Participation as teacher-assistant provides experience in applying principles of child guidance and development needed by teachers in preschool centers or secondary school child development laboratories.

HE 324 FAMILY DYNAMICS 3c-0l-3sh
Prerequisite: HE 224 or equivalent
Emphasis on processes and models of family development topics. Focus on approaches and dynamics of principles related to familial and marital adjustment and coping.

HE 350 EVALUATION AND METHODS OF TEACHING VOCATIONAL HOME ECONOMICS 3c-0l-3sh
Prerequisites: EP 302, HE 250
Orientation to classroom teaching through planned activities utilizing a variety of methods, techniques, and resources. Major methods and techniques of evaluation used to assess and report growth, development, and academic achievement of students are emphasized.

HE 351 EDUCATIONAL GAMES AND PUZZLES 1c-0l-1sh
Investigation and evaluation of commercially prepared educational games and puzzles and their place in the home economics education setting. Construction and evaluation of educational games and puzzles by students.

HE 352 TEACHING IN THE COMMUNITY 1c-0l-1sh
Prerequisite: HE 250
Planned observations and teaching experiences in local human services agencies. Choice of subject matter and strategies will be based on needs and interests of clients.

HE 390 INNOVATIVE TEACHING: EDUCATION var-1 to 3sh
Prerequisite: HE 250 or equivalent
Investigation and evaluation of innovative curriculum materials, resources, and techniques in home economics education.

HE 391 INNOVATIVE TEACHING: CHILD DEVELOPMENT CENTERS var-1 to 3sh
Prerequisite: HE 250 or equivalent
Investigation and evaluation of innovative curriculum materials, resources, and techniques for teaching in child development centers.

HE 394 INNOVATIVE TEACHING: FAMILY var-1 to 3sh
Prerequisite: HE 250 or equivalent
Investigation and evaluation of innovative curriculum materials, resources, and techniques in teaching family.

HE 398 INNOVATIVE TEACHING: CHILD DEVELOPMENT var-1 to 3sh
Prerequisite: HE 250 or equivalent
Investigation and evaluation of innovative curriculum materials, resources, and techniques in teaching child development.

HE 418 ADVANCED CHILD DEVELOPMENT 3c-0l-3sh
Prerequisite: HE 218
Study of trends in the field of child development based on a review of current literature. Observations of children in a variety of informal situations will be made within the limits of available resources.

HE 421 PRESCHOOL EDUCATION 3c-0l-3sh
Prerequisite: HE 320
Examination of the child development philosophy as the basis for decisions and methods in preschool education. Emphasis is placed on play as a developmental process and the major aspect of the preschool curriculum.

HE 422 EARLY CHILDHOOD EDUCATION 3c-0l-3sh
Prerequisite: HE 320
Current educational theories and research reviewed in terms of implication for preschool and their effect on material, equipment, and activity selection.

HE 424 FAMILY ISSUES 3c-0l-3sh
Prerequisite: HE 224
Concentrated study of selected areas of family life, with emphasis on current personal and social issues affecting the family.

HE 425 STUDY TOUR IN FAMILY LIFE var-2 to 6sh
OPTION: FAMILY LIFE
Opportunity to observe family social structure and values in relation to cultural background and economic conditions. Culture, class, ethnic variations in family/kinship systems examined.

OPTION: CHILD DEVELOPMENT
Opportunity to observe developing child in family life/education relative to cultural background and economic conditions.

HE 426 TECHNIQUES OF PARENT EDUCATION 3c-0l-3sh
Prerequisite: HE 320 or equivalent
Examination of nature, extent, and significance of parent education movement. Interrelationship of home and community agencies is examined in light of various programs, methods, and techniques of parenting education.

HE 427 ADMINISTRATION OF CHILD DEVELOPMENT CENTERS 3c-0l-3sh
Prerequisite: HE 320 or equivalent
Development of special knowledge and competencies needed by successful administrators of child care programs including proposal writing, budgeting, management, staff selection and training, appropriate curriculum materials, philosophy, parent involvement, child advocacy, and program evaluation.

HE 430 STUDENT TEACHING PRACTICUM var-1sh
Taken concurrently with ED 431 and ED 441. Assists student teachers in analyzing problems and experiences encountered during student teaching. Emphasizes the variety and types of home economics programs and focuses on developing effective teaching strategies (4 sessions of 3 1/2 hours during the semester).

HE 451 WORKSHOP IN HOME ECONOMICS EDUCATION 3c-0l-3sh
Prerequisite: HE 250
Identification and evaluation of current trends and issues in home economics education. Offered occasionally.

HE 454 HOME ECONOMICS EDUCATION FOR ADULTS 3c-0l-3sh
Prerequisite: HE 250
Focuses on background and philosophy of adult education; types of home economics programs and methods of implementation; characteristics of adult learners; observation and teaching participation in adult programs.

HE 455 HOME ECONOMICS PROGRAMS FOR INDIVIDUALS WITH SPECIAL NEEDS 3c-01-3sh
Prerequisite: EX 300
Application of vocational regulations and public laws in relation to individuals with special needs. Developing home economics programs (planning, methods, strategies, and resources) for individuals with special needs applicable to school and nonschool settings.

HE 456 INDEPENDENT LIVING FOR INDIVIDUALS WITH SPECIAL NEEDS 3c-0l-3sh
Prerequisite: EX 300
Home management and work simplification techniques for individuals with special needs. Includes adaptations and modifications for housing, clothing, food, child care, and consumer problems of handicapped and elderly individuals.

HE 463 FAMILY AND THE COMMUNITY 3c-0l-3sh
Study of community contributions and problems that affect families and their contributions to community. Investigation of ways group dynamics, communication media, and other resources aid understanding of human behaviors. Field experience is an integral part of the course.

HE 470 OCCUPATIONAL HOME ECONOMICS IN AMERICAN EDUCATION 3c-0l-3sh
Prerequisite: HE 250 or equivalent
Explores purposes and types of occupational home economics programs. Emphasis is on individualizing instruction in a competency-based program including special needs students. Rationale for cooperative education, maintaining FHA/HERO and an advisory committee, and program evaluation are included. Field trips are frequent.

HE 471 CURRICULUM DEVELOPMENT IN HOME ECONOMICS EDUCATION 3c-0l-3sh
Prerequisite: HE 250
Various tasks and processes of curriculum development reviewed and analyzed. Emphasis on realistic decision making and innovative procedures in developing home economics curriculum. Offered occasionally.

HE 472 EVALUATION IN HOME ECONOMICS 3c-0l-3sh
Nature and scope of evaluation in contemporary home economics programs emphasizing use and construction of a variety of tests and evaluation devices designed to measure comprehensive home economics educational objectives. Offered occasionally.

HE 479 OCCUPATIONAL HOME ECONOMICS EXPERIENCE var-3 to 6sh
Prerequisites: Approval of instructor and department chairperson; upper level standing
Personalized experiences designed to broaden competencies in a specific area of occupational home economics and provide preservice teachers with a broader perspective of current technology used in business and industry. Offered occasionally.

HE 482 INDEPENDENT STUDY var-1 to 3sh
Upper level students with high scholastic achievement pursue their particular interests outside the realm of the organized home economics education curriculum. May be taken more than once to a maximum of 3 semester hours. Approval of department required.

HE 493 INTERNSHIP IN HOME ECONOMICS EDUCATION var-1 to 12sh
Prerequisites: Permission of department, college dean, and university internship coordinator; upper level standing
Practical experience related to the student's major area of study. Objectives are developed individually in consultation with university faculty member who supervises the internship. Log and major paper required. May be repeated up to a total of 12 semester hours; however, these semester hours are not applicable toward the 124 semester hours required for graduation if student receives 12 semester hours in student teaching.

HI: HISTORY

Department of History
College of Humanities and Social Sciences

HI 101 HISTORY OF CIVILIZATION I 3c-0l-3sh
Survey course, presenting in various forms the origin and development of Western man's major political, social, economic, religious, and intellectual institutions to approximately 1600 A.D.

HI 102 HISTORY OF CIVILIZATION II 2/3c-0l-2/3sh
Survey of man's development from 1600 A.D. to present, in which economic, political, social, and intellectual trends are discussed. See also HI 112.

HI 103 HISTORY OF THE UNITED STATES AND PENNSYLVANIA I 3c-0l-3sh
Survey of American history from colonization to 1865, with attention to Pennsylvania, colonial foundations, emergence of Federal Union, political and social reform, and controversy over sectionalism and slavery.

HI 104 HISTORY OF THE UNITED STATES AND PENNSYLVANIA II 3c-0l-3sh
Survey of history of the United States and Pennsylvania since 1865, with emphasis on major economic, political, and social trends and development of American culture. Also considered is the role of America in world affairs.

HI 112 HISTORY SATELLITES 1c-0l-1sh
A variety of topics from Civilization which, when combined with a 2-credit History of Civilization II (HI 102), will fulfill a requirement in the Social Science package in General Education. Additional HI112 credits may be used as electives.

HI 200 INTRODUCTION TO HISTORY 1/3c-0l-1/3sh
For history majors and concentrates. Topics include philosophy of history, important schools of history and historians, and methods of historical research. Student is encouraged to become a better historian and to identify with historical profession.

HI 210 HISTORY OF IUP 3c-0l-3sh
The focus is the evolution of Indiana as an institution. Emphasis is placed on the direction, the atmosphere, and the interrelation of the school to the world at large. Attention is given to the development of various internal areas. The University Archives and resource persons are utilized.

HI 301 HISTORY OF GREECE 3c-0l-3sh
Will analyze major political, social, and economic developments in ancient Greek civilization from Bronze Age to death of Alexander.

HI 302 HISTORY OF ROME 3c-0l-3sh
Will trace Roman history from early Republic down to fall of Empire. Roman political theory will be particularly emphasized.

HI 303 MEDIEVAL EUROPE I, 400-1000 3c-0l-3sh
History of early Medieval Europe, from decline of Rome to beginnings of High Middle Ages; emphasis on political, social, economic, religious, and intellectual developments.

HI 304 MEDIEVAL EUROPE II, 1000-1300 3c-0l-3sh
History of late Medieval Europe, from High Middle Ages to Renaissance period; emphasis on political, social, economic, religious, and intellectual developments.

HI 305 RENAISSANCE AND REFORMATION 3c-0l-3sh
History of Europe from c. 1250; rise of commercial city, kings, and pressures on Christian Church to 1600. Some consideration of technology and voyages.

HI 306 EARLY MODERN EUROPE 3c-0l-3sh
Greatness of France under Louis XIV; Sweden; Thirty Years' War. Emergence of modern society; French Revolution.

HI 307 HISTORY OF EUROPE: 1815-1914 3c-0l-3sh
Study of Europe in 19th century, with emphasis on the emergence of major thought patterns, Romanticism, Nationalism, Socialism, and Positivism.

HI 308 TWENTIETH-CENTURY EUROPE 3c-0l-3sh
Political, economic, and diplomatic trends in Europe since 1900, with major emphasis on causes and results of war and search for security.

HI 311 RISE AND FALL OF HITLER'S EMPIRE 3c-0l-3sh
In-depth study of Hitler and the Nazi Order; offers an analysis of 19th-century origins of Nazi ideology and intensively analyzes domestic and foreign totalitarian policy (1920-1945) including Holocaust, Resistance, and the postwar Nuremberg Trials.

HI 320 HISTORY OF ENGLAND TO 1688 3c-0l-3sh
Survey of the growth of the English nation, with emphasis on political, social, and economic developments leading to 17th century conflict between Crown and Parliament.

HI 321 HISTORY OF ENGLAND, 1688 TO PRESENT 3c-0l-3sh
Survey of the growth of England as a democratic constitutional monarchy. Attention directed to industrial revolution and to imperial expansion and England's role in 20th-century world. Attention given to social and cultural history.

HI 322 FRENCH REVOLUTION AND NAPOLEON 3c-0l-3sh
Brief sketch of Old Regime, concentration on Revolution and Empire, with emphasis on politics, social structure, diplomacy, and economics.

HI 323 MODERN FRANCE 3c-0l-3sh
Investigation of political, cultural, economic, and social developments since 1815. Discussions and readings.

HI 324 HISTORY OF GERMANY TO 1848 3c-0l-3sh
Study of the development of Germany politically and culturally from ancient times, emphasizing medieval and early modern periods to 1849.

HI 325 HISTORY OF GERMANY: 1849 TO THE PRESENT 3c-0l-3sh
Study of the political and cultural development of modern Germany from the Revolution of 1848, including imperial, republican, and totalitarian phases, to post-World War II East and West Germany.

HI 326 HISTORY OF RUSSIA 3c-0l-3sh
General survey of Russian history, culture, and institutions. Special consideration given to study of historical forces formative of Revolution of 1917.

HI 327 HISTORY OF SOVIET RUSSIA 3c-0l-3sh
General survey of contemporary Soviet history, culture, and institutions. Special consideration is given to the study of communist theory and its place in current Russian historiography.

HI 330 HISTORY OF THE ISLAMIC CIVILIZATION 3c-0l-3sh
An approach to learning about a non-Western culture: Muhammad, Arabs, Muslims as creators of a great civilization from rise of Islam to 1800; emphasis on cultural institutions of Islam and their interrelationships within Middle East.

HI 331 MODERN MIDDLE EAST 3c-0l-3sh
Survey of changes that have taken place in Middle East and in Islam since 18th century and of contemporary problems in that region.

HI 335 HISTORY OF THE FAR EAST 3c-0l-3sh
History of China and Japan from ancient times, Buddhism, medieval Japan, Chinese communism, industrialization. Some consideration of peripheral Asia from 1500.

HI 340 COLONIAL AMERICA 3c-0l-3sh
Survey of original 13 states from their inception as colonies within the British empire to 1763, the eve of Independence. Attention is given to their political development; economic position within the empire; relations with Indians; and evolution of social, educational, and religious life.

HI 341 AMERICAN REVOLUTION 3c-0l-3sh
An examination of Whig-Tory participants of American Revolution. Examines events from 1763 to 1783. Changing interpretations of the causes and effects of the revolution will be discussed.

HI 342 THE EARLY REPUBLIC 3c-0l-3sh
Survey of United States history from 1783 to 1850, with special attention on constitutional, political, economic, and social trends.

HI 343 CIVIL WAR AND RECONSTRUCTION 3c-0l-3sh
Study of the failure of American democracy to cope with issues of mid-19th century, followed by political, economic, military, and social developments during War and reconciliation of North and South.

HI 344 HISTORY OF THE UNITED STATES, 1876-1900 3c-0l-3sh
Stresses reaction of various segments of population to rapid industrialization, urbanization, and corporatization of American life and emergence of U.S. as a world power. Special attention to the formation of new institutions.

HI 345 THE AGE OF RAGTIME: AMERICAN HISTORY, 1900-1929 3c-0l-3sh
Using the nation's cultural development as its thematic foundation, this course analyzes the transitional character of the Progressive Era, World War I, and the 1920s.

HI 346 RECENT UNITED STATES HISTORY 3c-0l-3sh
Study of political, economic, and cultural changes in American life since 1929; examines roots of social problems facing us today. Some recent foreign policy trends also studied.

HI 350 HISTORY OF LATIN AMERICA: COLONIAL PERIOD, 1450-1820 3c-0l-3sh
Study of life of people, Indian cultures, conquest by Spaniards and Portuguese, government during Colonial Period, and Wars of Independence.

HI 351 HISTORY OF LATIN AMERICA: NATIONAL PERIOD, 1820-PRESENT 3c-0l-3sh
Study of the history of nations which have emerged since independence; emphasis on economic, political, cultural, and social developments of these nations, as well as relationships of these nations to others in the hemisphere.

HI 360 HISTORY OF PENNSYLVANIA 3c-0l-3sh
Emphasizes the cultural, economic, political, and social development of our state in its various periods from colonial to today. Special attention given to diversity of Pennsylvania's people, their institutions and problems.

HI 361 HISTORY OF AMERICAN DIPLOMACY, 1775-1900 3c-0l-3sh
Traces foreign relations of the United States from Independence to emergence as a world power. Topics concentrate on themes of commercial relations, political isolation, expansion, and debate over imperialism.

HI 362 HISTORY OF AMERICAN DIPLOMACY 1900-PRESENT 3c-0l-3sh
Treats primarily our 20th-century involvement in world affairs and domestic debate over that involvement. Special emphasis will be placed on the role of interest groups and increasing power of Executive Department over foreign affairs.

HI 363 THOUGHT AND CULTURE IN EARLY AMERICA 3c-0l-3sh
Selected topics in early American intellectual and cultural growth, with emphasis on Puritanism, Enlightenment, cultural nationalism, and Romantic movement.

HI 364 THOUGHT AND CULTURE IN MODERN AMERICA 3c-0l-3sh
Selected treatment of historical development of modern American movements in social and political thought, religion, philosophy, fine arts, and literature.

HI 365 HISTORY OF BLACK AMERICA SINCE EMANCIPATION 3c-0l-3sh
Description and analysis of the role of blacks in the history of the United States since the Civil War; emphasis on key leaders, major organizations, leading movements, and crucial ideologies of blacks in modern America.

HI 367 ECONOMIC HISTORY OF THE UNITED STATES 3c-0l-3sh
Historical development of economic institutions in American life since Independence; emphasis on farming, labor, transportation, banking, and manufacturing.

HI 368 U.S. URBAN HISTORY 3c-0l-3sh
A survey of American cities from their beginnings to present, emphasizing the relationship of urban history to social science theory and stages and process of city development.

HI 369 WOMEN IN AMERICA 3c-0l-3sh
A study of the activities of women from the colonial era to the modern era-evaluating cultural, societal, religious, economic, and political frameworks. It will review women's involvement in movements for feminism, social reform, unionism, and the abolition of slavery.

HI 370 RELIGION IN AMERICA 3c-0l-3sh
A history of religious belief and practice in the United States from the colonial period to the present, with an emphasis on the last one hundred years.

HI 372 HISTORY OF THE EARLY AMERICAN WORKING CLASS 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the 18th and 19th centuries. The work settings and communities of workers will be examined as well as unions such as the National Labor Union and the Knights of Labor.

HI 373 HISTORY OF THE MODERN AMERICAN WORKING CLASS 3c-0l-3sh
Description and analysis of the nature and significance of the working class of the United States in the 20th century. Work settings and strikes will be examined and analyzed as well as unions such as the United Mine Workers and the United Auto Workers and labor leaders including Samuel Gompers, John L. Lewis, and George Meany.

HI 374 HISTORY OF ORGANIZED CRIME 3c-0l-3sh
This course studies the relationship between urban, entrepreneurial crime, and the evolution of industrial America.

HI 390 HISTORY OF WOMEN - WORLD CULTURES 3c-0l-3sh
Explores religious, legal, political, economic, and mythic dimensions of women in society from ancient to modern times, including Western and Non-Western experiences.

HI 391 FILM AS HISTORY 3c-0l-3sh
Particularly concerned with probing the relationship between cinema and society. History of film is explored and student is given some background in film interpretation and cinematography, the western, science fiction, police films, and great foreign and American detective films.

HI 392 CRIMES AND PUNISHMENTS IN HISTORY 3c-0l-3sh
Explores how historical methodology is applied to crimes; how the historical settings have influenced the commission of crimes, as well as the nature and extent of punishment for crimes on individual, societal, and governmental levels.

HI 481 SPECIAL STUDIES IN HISTORY var-1 to 3sh
Each semester, courses are offered in interest areas that are not part of the regular program. Some examples of courses of this type are The Victorian Age, The History of Love, World War II, The Great Depression, The Adams Chronicles, and the History of New York City. Students may schedule as many of these courses as desired, but two per semester is the usual limit.

HI 482 INDEPENDENT STUDY var-3 to 6sh
Prerequisites: 12 sh
in history; a 3.0 history average; permission of a faculty member
Involves directed reading or research for qualified students. We encourage experimental projects and personalized learning. Honors sections are provided for qualified students.

HI 483 INDEPENDENT STUDY 3c-0l-3sh
An honors program within the independent study format. Minimum qualifications are a 3.0 QPA, 15 sh of history, and a 3.2 average in history classes. Satisfactory honors work is rewarded by formal recognition at graduation.

HI 493 INTERNSHIP var-3 to 12sh
With departmental approval, students are attached to local or national government or private agencies doing directive, bibliographical, archival, or museum work. Advising professor meets with intern regularly and determines what papers or reports will be required.

HP: HEALTH AND PHYSICAL EDUCATION

Department of Health and Physical Education
College of Human Ecology and Health Sciences

HP 101 PERSONAL HEALTH AND WELLNESS 2c-0l-2sh
Understanding scientific approach to personal health and wellness: this course emphasizes the positive aspects of health, benefits of good health behaviors, and the use of health resources. The focus is on the components of healthy lifestyles.

HP 110 BEGINNING SWIMMING 0c-2l-1sh
Fundamentals and techniques of swimming, fitness, and aquatic safety. Designed to meet the needs of the adult nonswimmer.

HP 113 ARCHERY/INTERMEDIATE SWIMMING 0c-2l-1sh
Fundamentals and techniques of archery and swimming.

HP 115 BADMINTON-FITNESS 0c-2l-1sh
Fundamentals and techniques of badminton and fitness.

HP 116 BADMINTON-VOLLEYBALL 0c-2l-1sh
Fundamentals and techniques of badminton and volleyball.

HP 117 FITNESS/SWIMMING 0c-2l-1sh
Fundamentals and techniques of swimming and fitness.

HP 118 FITNESS-VOLLEYBALL 0c-2l-1sh
Fundamentals and techniques of fitness and volleyball.

HP 119 GOLF-BOWLING 0c-2l-1sh
Fundamentals and techniques of golf and bowling.

HR 120 TENNIS-INTERMEDIATE SWIMMING 0c-2l-1sh
Fundamentals and techniques of tennis and swimming.

HP 121 INTERMEDIATE SWIMMING-VOLLEYBALL 0c-2l-1sh
Fundamentals and techniques of swimming and volleyball.

HP 122 CONTEMPORARY (MODERN) DANCE I 0c-2l-1sh
Fundamentals and techniques of contemporary modern dance.

HP 123 FOLK AND SQUARE DANCE I 0c-2l-1sh
Fundamentals and techniques of folk and square dancing.

HP 125 BASIC TAP AND BALLROOM DANCE 0c-2l-1sh
Fundamentals and techniques of basic tap and ballroom dance.

HP 126 RESISTIVE EXERCISES 0c-2l-1sh
Fundamentals and techniques of resistive exercises.

HP 127 FENCING 0c-2l-1sh
Fundamentals and techniques of fencing.

HP 128 GOLF 0c-2l-1sh
Fundamentals and techniques of golf.

HP 129 BADMINTON/TENNIS 0c-2l-1sh
Fundamentals and techniques of badminton and tennis.

HP 133 FOLK AND SQUARE DANCE II 0c-2l-1sh
Fundamentals and techniques of folk and square dance.

HP 134 BOWLING 0c-2l-1sh
Fundamentals and techniques of bowling.

HP 137 GYMNASTICS 0c-2l-1sh
Fundamentals and techniques of gymnastics.

HP 138 RACQUETBALL 0c-2l-1sh
Fundamentals and techniques of racquetball.

HP 139 AEROBIC FITNESS THROUGH DANCE 1c-2l-1sh
A physical fitness development course for men and women that employs a combination of exercises and dance techniques performed to music. The purpose of the course is to develop a sequential exercise program that allows the student to develop and maintain aerobic fitness, understand body alignment and the principles of exercise, develop correct dance techniques, and plan and develop an individualized and independent continuance program.

HP 142 FOUNDATIONS OF HEALTH, PHYSICAL EDUCATION, AND RECREATION 3c-0l-3sh
Scientific principles, philosophical considerations, and career opportunities in professions of health, physical education, recreation, and sport sciences.

HP 145 TENNIS 0c-2l-1sh
Fundamentals and techniques of tennis.

HP 146 CONTEMPORARY DANCE II 0c-2l-1sh
Fundamentals and techniques of contemporary dance.

HP 147 TENNIS/FENCING 0c-2l-1sh
Fundamentals and techniques of tennis and fencing.

HP 160 DOWNHILL SKIING 1sh
The cognitives and skills necessary for beginning downhill skiing. (FEE)

HP 161 BASIC ROCK CLIMBING 0c-2l-1sh
Fundamentals and techniques of rock climbing.

HP 163 BACKPACKING 0c-2l-1sh
Fundamentals and techniques of backpacking.

HP 200 FUNDAMENTALS OF PHYSICAL ACTIVITY 1c-0l-1sh
A foundation course designed for the purpose of training in the analysis and performance of the fundamental skills for subsequent motor behavior as they relate to games, sports, and dance. The opportunity to refine powers of observation through principles of efficient and effective movement fundamentals is provided. Individual data profile charts of performance will be completed for future reference.

HP 201 ARCHERY BADMINTON/BOWLING var-1sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency in each activity. Methods and materials emphasized.

HP 202 BASEBALL var-.5sh
Basic skills, position play, and team participation in baseball. Baseball theory and strategy.

HP 203 BASKETBALL var-.5sh
Team tactics, drill patterns, conditioning programs, and teaching/coaching methods.

HP 204 FIELD HOCKEY var-.5sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency. Methods and materials emphasized.

HP 205 RHYTHMS AND MOVEMENT var-1sh
Prerequisite: HP 200
Development of basic movement techniques through rhythmic experiences, knowledge of music notation and terminology, and methods in creative presentation.

HP 206 SOFTBALL var-.5sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency. Methods and materials emphasized.

HP 207 TENNIS var-.5sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency. Methods and materials emphasized.

HP 208 SOCCER var-.5sh
Team tactics, drill patterns, teaching and coaching techniques.

HP 215 TECHNIQUES OF JAZZ DANCE 0c-2l-1sh
A course in jazz techniques applied to jazz music and various jazz dance styles. Movement coordination, style, and rhythm will be emphasized.

HP 218 BALLET I 1c-2l-2sh
An introductory course in classical ballet technique and terminology. The course will focus on how to properly execute basic barre and center technique; placement or "epaulment"— the classical line of the head, torso, arms, and legs; the kinetic coordination necessary for classical ballet; musicality and phrasing of movements; and general orientation to the historical development of ballet and its terminology.

HP 221 HUMAN STRUCTURE AND FUNCTION 3c-0l-3sh
Anatomical organization of the human body, surveyed in sufficient depth to prepare students for physiology, biomechanics, and adaptive physical education.

HP 230 AEROBIC FITNESS 1c-2l-2sh
An opportunity to participate in a variety of aerobic activities; will aid fitness leaders in developing and implementing several types of aerobic programs; will offer current information on aerobics as preventive medicine.

HP 242 EMERGENCY HEALTH CARE 1c-2l-1sh
American Red Cross Standard, Advanced and Instructor's certification, and Multimedia Instructor's certification awarded upon successful completion of this course.

HP 246 BIOMECHANICS 3c-0l-3sh
Prerequisite: HP 221
Study of the relationship between mechanical and physical principles and human movement.

HP 250 MOTORCYCLING: RECREATION AND SAFETY 1c-0l-1sh
Prerequisites: Ability to ride a bicycle, valid drivers license, motorcycle permit
Two two-hour sessions per week for seven weeks. Using physical fitness as one aspect of the course, it is designed for those who want instruction on safe and efficient operation of motorcycles from a practical and recreational viewpoint.

HP 251 ACCIDENT CAUSATION AND PREVENTION 3c-0l-3sh
Establish the relationship between psychology and accident causation programming by examining the different variables in accident causation. Enables the student to better understand human behavior as it relates to the causes of accidents.

HP 252 INTRODUCTION TO THE DRIVING TASK 2c-2l-3sh
Provides an in-depth treatment of operating a motor vehicle competently in all major variations and under most conditions encountered in traffic. A competent operator is one who performs the total driving task knowledgeably and skillfully and demonstrates full understanding and application of identification, prediction, decision, and execution process. Students must have at least two years of driving experience.

HP 261 WATER SAFETY INSTRUCTOR 0c-2l-1sh
Prerequisites: Departmental consent and lifesaving certification
Emphasizes the teaching aspect of skills, techniques, and attitudes necessary in all areas of swimming. Students successfully completing course are qualified to hold such positions as water front directors, aquatic directors, and other similar positions.

HP 262 SCUBA DIVING 0c-2l-1sh
Prerequisites: Fee, departmental consent, and HP 265
Designed to teach necessary skills and proper use of equipment for underwater swimming. Tanks, regulators, weights, and special equipment furnished. Student must purchase a mask, fins, and snorkle (approximately $15.00). Includes theory as well as practical work.

HP 263 AQUATICS 0c-2l-1sh
Basic performance techniques in swimming strokes presented with special emphasis on teaching methodology, aquatic sports and games, water safety, skin diving, springboard diving, and other aquatic activities.

HP 264 ADVANCED AQUATICS 0c-2l-1sh
Swimming and rescue skills necessary to complete American Red Cross Senior Lifesaving Course. Emphasis placed upon a broad range of other aquatic experiences and teaching strategies.

HP 265 LIFEGUARDING 0c-2l-1sh
Prerequisites: Departmental consent and Advanced Swimmer
Designed for professional lifeguards. Includes lifeguarding techniques for pools and fresh and saltwater beaches. Red Cross certification (Pittsburgh Division) granted upon satisfactory completion of course requirements.

HP 266 BASIC SMALLCRAFT 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Designed to introduce the use of the canoe, paddle board, and sailboat. Emphasis is placed on the development of boating skills, safety rescue, and survival procedures. Red Cross smallcraft certification is granted upon successful completion of the course.

HP 267 BASIC SYNCHRONIZED SWIMMING 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Activity course designed to assist students in the development of beginning synchronized swimming skills. YMCA certification is granted upon successful completion of course requirements.

HP 268 WATER SKIING 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Water skiing for beginners. Includes use of equipment, ski techniques, and safety. Novice I and Novice II levels of certification of the American Water Ski Association program are available upon successful completion of course requirements.

HP 269 POWER BOATING 0c-2l-1sh
Prerequisite: Intermediate Swimming ability
Introduction to the safe use of small power craft and related equipment for recreational boating activities such as water skiing, fishing, and scuba diving. Includes maintenance, repair, rescue, and survival.

HP 270 INSTRUCTOR OF HANDICAPPED SWIMMING 0c-2l-1sh
Prerequisite: HP 261
Concerned with the learning of skills used to teach swimming to exceptional children. All handicaps are considered. This course is important not only in physical education but also for the mentally retarded, rehabilitation education, agency personnel, postgraduate swimming education, YMCA's Boys Clubs, community programs, private clubs, and industrial programs. The Red Cross certification Instructor of Swimming for the Handicapped is granted upon successful completion of the course.

HP 271 INSTRUCTOR OF SCUBA DIVING 0c-2l-1sh
Prerequisite: HP 262
Prepares instructors to teach skin and scuba diving. Emphasis is placed on teaching methods, use and mechanics of equipment, safety, diving physics and physiology, and advanced diving skills. Instructor of Scuba Diving certificate granted by the Professional Association of Diving Instructors upon successful completion of the course.

HP 272 INSTRUCTOR OF CANOEING 0c-2l-1sh
Prerequisite: HP 266
Concerned with the learning of skills pertinent to teaching canoeing to beginners. All aspects of canoeing including paddling, repair of equipment, white water canoeing, safety, survival, and teaching techniques are presented. The Red Cross certification Canoeing Instructor is granted upon successful completion of the course.

HP 273 INSTRUCTOR OF SAILING 0c-2l-1sh
Prerequisite: HP 266
Concerned with learning of skills pertinent to teaching beginning sailing. All aspects of sailing are considered including the elements of sailing, repair of equipment, racing, safety, and techniques of teaching.

HP 274 INSTRUCTOR OF INFANTS AND PRESCHOOLERS IN SWIMMING 0c-2l-1sh
Prerequisites: HP 261, instructor's consent
Methods course for preparation of swimming instructors in the knowledge and skills of teaching young children to swim. YMCA certifications Instructor of the Very Young granted upon successful completion of course requirements.

HP 276 COACHING OF SWIMMING 0c-2l-1sh
Prerequisite: HP 261
A lecture-discussion methods course designed to prepare Physical Education majors for coaching of swimming. Emphasis is placed on training methods, officiating, nutrition, scientific principles, and meet strategy.

HP 277 COACHING OF SYNCHRONIZED SWIMMING 1c-2l-2sh
Designed to go beyond the activity nature of Basic Synchronized Swimming (HP 267). Students are involved in set design, costumes, selection of music, making props, selecting themes, and organizing a program.

HP 279 SWIMMING POOL MAINTENANCE AND CHEMISTRY 2l-0l-2sh
Prerequisite: HP 264
A lecture-discussion course designed to teach fundamental water chemistry, filtration, treatment of water problems, winterization of outdoor pools, and pool management. Emphasis is placed on water testing and analysis of chemicals and bacteria.

HP 280 AQUATIC FACILITIES MANAGEMENT 2l-0l-2sh
Prerequisite: HP 264
An organization and administration course designed to prepare the aquatic professional for management of indoor and outdoor facilities. Includes facility design, safety procedures activity, sport and recreational aspects.

HP 300 FOLK AND SQUARE DANCE var-.5sh
Prerequisite: HP 205
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency in each activity. The role of folk and square dance in the physical education programs of all levels is considered. Emphasis on methods and materials.

HP 301 MODERN DANCE var-.5sh
Prerequisite: HP 205
Basic course in dance, introducing the student to experiences in the development of dance as a creative art and an educational medium.

HP 302 GYMNASTICS var-1sh
Prerequisite: HP 205
Fundamental skill progressions and analyses in tumbling and all apparatus areas. Emphasis on individual conditioning and basic skill competency, safety procedures, and teaching techniques.

HP 303 FOOTBALL var-.5sh
Fundamentals of position play, patterns of offense and defense, individual skills, and team organization in football.

HP 304 GOLF var-.5sh
Skill progressions and analyses in combination with an opportunity to progress individually in skill competency. Methods and materials emphasized.

HP 305 TRACK AND FIELD var-.5sh
Basic movement patterns of running, jumping, and throwing; various training programs of track and field, rules and regulations. The students' abilities and skills are developed in order that they may be better able to teach and/or coach track and field.

HP 306 VOLLEYBALL var-.5sh
Skill progressions and analyses, in combination with an opportunity to progress individually in skill competency. Methods and materials emphasized.

HP 307 WRESTLING var-.5sh
Basic skills, moves, and holds used in college and high school wrestling.

HP 311 ADVANCED FIELD HOCKEY/VOLLEYBALL 1c-2l-2sh
Prerequisites: HP 204, 306
Advanced techniques and game strategy, with opportunities for individual skill progression. Methods and materials are presented from the aspect of coaching responsibilities in these activities.

HP 312 ADVANCED BASKETBALL/SOFTBALL 1c-2l-2sh
Prerequisites: HP 203,206
Advanced techniques and game strategy, with opportunities for individual skill progression. Methods and materials are presented from the aspect of coaching responsibilities in these activities.

HP 314 ADVANCED MODERN DANCE 1c-21-2sh
Prerequisite: Previous dance course or department acceptance of experience
Advanced techniques of performance and choreography. Theory and composition form are an integral part of course content.

HP 316 VOLLEYBALL OFFICIATING 1c-21-1sh
Prerequisite: HP 306
Officiating techniques and responsibilities in volleyball. Opportunities for officiating experience and qualification for professional ratings.

HP 317 BASKETBALL OFFICIATING 1c-21-1sh
Prerequisite: HP 203
Officiating techniques and responsibilities in basketball. Opportunities for officiating experience and qualification for professional ratings.

HP 318 PREPROFESSIONAL EXPERIENCE I 3c-0l-1sh
Students teach as assistants to a faculty member in two different activities, one in physical education (general education) and one in elementary physical education at the University School. Emphasis on unit development, class management, leadership skills, and evaluation.

HP 319 PREPROFESSIONAL EXPERIENCE II var-3sh
Prerequisites: Advanced standing, departmental approval
Students may request an assisting/teaching/leadership assignment in certain university-related areas that may be either instructional or noninstructional in nature. Examples of such professional areas are adaptives, recreation, dance, coaching, aquatics, intramurals, administration, elementary, service or major classes, club activities, assisting in laboratory, or the training room.

HP 321 METHODS IN ELEMENTARY PHYSICAL EDUCATION 3c-0l-3sh
Study and application of theories of movement, self-testing activities, rhythms, relays, games, gymnastics suitable for elementary school children. Observation, materials, and methods of teaching and opportunities for intern teaching provided.

HP 322 DANCE PRODUCTION 3c-0l-3sh
Prerequisite: HP 122 or HP 301
Advanced course in contemporary dance technique and composition; studio productions with staging, lighting, costuming, and make-up as student responsibilities.

HP 325 SCHOOL HEALTH PROGRAMS 3c-0l-3sh
Organization of school health programs, relationships, and utilization of community resources.

HP 330 BALLET II 1c-0l-3sh
Prerequisites: Previous classical training and the ability to execute basic ballet techniques or permission of the instructor.
An intermediate course in classical ballet technique and terminology. The course will focus on increasing technical control and coordination; developing line and placement; extending the classical ballet vocabulary; and understanding the historical development of ballet and its affect of terminology.

HP 333 PSYCHOLOGY OF COACHING 2c-0l-2sh
The goals of athletics in schools and communities; principles and responsibilities of the coach; current problems.

HP 335 COACHING AND MANAGING OF ATHLETIC PROGRAMS 3c-0l-3sh
Lecture course designed to prepare students for coaching or administering an athletic program. Emphasizes the professional preparation and responsibilities of a coach, the support and auxiliary personnel working under and with the coach, the coach's responsibility to the athletes, plus the administrative responsibilities of coaching.

HP 336 ORGANIZATION AND ADMINISTRATION OF RECREATION 2c-0l-2sh
History, theory, and philosophy of recreation; importance of play in modern world, trends in recreation, problems encountered in organizing community school programs, and principles of leadership.

HP 341 EVALUATION IN HEALTH AND PHYSICAL EDUCATION 3c-0l-3sh
Evaluation theory, instructional objectives, and cognitive test construction; technical and practical considerations in testing and interpretation of test results.

HP 343 PHYSIOLOGY OF EXERCISE 3c-0l-3sh
Prerequisite: HP 221
Physiological effects of exercise in humans. Major factors of diet, conditioning, physical fitness, maximum performance level, and fatigue are considered.

HP 344 ADAPTED PHYSICAL EDUCATION 3c-0l-3sh
Prerequisite: HP 246
Recognition of structural deviations, corrective exercises, and physical education programs for a wide range of handicaps.

HP 345 ATHLETIC TRAINING I 3c-0l-3sh
Prerequisite: HP 221, Human Structure and Function
Specifically designed to introduce students to the discipline of athletic training with emphasis in prevention, evaluation, management, and rehabilitation in sports medicine.

HP 346 ATHLETIC TRAINING II 2c-0l-1sh
Should be taken concurrently with HP 345
Provides sufficient opportunity for each student to develop proficient skills and techniques in the areas of evaluation, assessment, taping, and rehabilitation procedures.

HP 349 DANCE REPERTOIRE I 1c-2l-1sh
Prerequisite: Department consent
Designed to permit students to be exposed to wide range of dance repertoire, original choreography, and technique.

HP 350 DANCE REPERTOIRE II 1c-2l-1sh
Prerequisite: HP 349
Designed to permit students to explore dance repertoire, choreography, and technique beyond HP 349.

HP 353 DRIVER EDUCATION PROGRAM MANAGEMENT 3c-0l-3sh
Prerequisites: HP 251, HP 252
Emphasizes the development, organization, and management of high school driver education from the standpoint of its historical development to its present programs designed to meet the demands of the highway transportation system. Special emphasis on the role of the teacher in conducting a quality program that will meet with student, parent, school and community approval.

HP 354 APPLICATION OF DRIVER EDUCATION INSTRUCTIONAL MODES 2c-2l-3sh
Prerequisites: HP 251, HP 252, HP 353
Prepares prospective driver education teachers to plan, teach, and evaluate the four modes of driver education (classroom, on-road, simulation, and multiple vehicle range). Teaching high school students in supervised laboratory sessions is provided.

HP 372 HEALTH AND PHYSICAL EDUCATION FOR SPECIAL POPULATIONS 2c-0l-2sh
Preerequisite: EX 220
Methods and techniques of teaching health and physical education to special populations will be explored. Designed primarily for students majoring in special education, focus will be on handicapping conditions, limitations imposed by such conditions, and the responsibility of the special education teacher working in the physical education setting.

HP 375 PHYSIOLOGICAL BASIS OF STRENGTH TRAINING
This course is designed to give the student the anatomical and physiological basis of muscle function. Students should also gain an understanding of changes that can be made through weight training and knowledge of programs that will bring about these changes. Opportunities for working with various types of equipment will be available.

HP 405 ORGANIZATION AND TECHNIQUES OF OUTDOOR RECREATION 2c-0l-2sh
A study of the philosophy, current issues, and organizations of Outdoor Recreations. Programming for organized camping and outdoor adventure activities is included.

HP 408 GUIDED RESEARCH PROBLEM var-2sh
Prerequisite: Permission of department chairperson
Selection and research of a problem pertinent to student interests and those of the professions of Health, Physical Education, and Recreation. Classes held on a seminar basis.

HP 410 EXERCISE PRESCRIPTION 3c-0l-3sh
Prerequisite: HP 343
Designed to teach individuals to write exercise prescriptions based upon a subject's tolerance for physical activity. Special emphasis on risk factors, techniques of evaluation, drugs, injuries, environmental factors, motivation, and their role in physical activity assessment.

HP 411 PHYSICAL FITNESS APPRAISAL 3c-0l-3sh
This course involves the selection, administration, and interpretation of various tests for appraising the physical fitness levels of individuals. Information will be given concerning the various fitness components and discussions will be held so that each student gains an understanding of the variables that will be tested.

HP 412 PHYSICAL ACTIVITY AND STRESS MANAGEMENT 3c-0l-3sh
Acquisition of necessary understanding of anxiety and stress; their nature, place in society, and intervention strategies as they relate to physical activity.

HP 413 PHYSICAL ACTIVITY AND AGING 3c-0l-3sh
Presents major aspects of physical activity, its importance to the older adult, and the organization of an activity program. Attention to physiology of physical activity, effects of activity on growth and aging, exercise prescription, flexibility, overweight and obesity, and motivational strategies.

HP 426 HEALTH SCIENCE INSTRUCTION 3c-0l-3sh
Health curriculum - K-12, Methods and Media of instruction in Health Science.

HP 432 ORGANIZATION AND ADMINISTRATION OF INTRAMURALS AND INTERSCHOLASTICS 3c-0l-3sh
History, theory, philosophy, and principles of intramural and interscholastic athletic programs.

HP 433 APPLICATION OF THEORY TO MOTOR LEARNING 2c-0l-2sh
Identification of the aspects of motor learning and its similarity and difference to cognitive and affective learned behavior. Characteristics of children and adolescents. Special emphasis given to the principles of psychomotor learning.

HP 434 ADVANCED SOCCER WORKSHOP 1c-2l-1sh
Prerequisite: HP 208 or department acceptance of experience
Principles of attack and defense and their application in group and team play. The study of team play will be carried out, in the main, using small sided games. Those participating will be able to observe, teach, evaluate, and be evaluated.

HP 441 PSYCHOSOCIAL IMPLICATIONS FOR HEALTH, PHYSICAL EDUCATION, AND RECREATION 3c-0l-3sh
A study of variables that influence human performance with emphasis on psychological and sociological research.

HP 442 SEMINAR IN HEALTH, PHYSICAL EDUCATION, AND RECREATION 3c-0l-3sh
Theory and philosophy of Health, Physical Education, and Recreation, current issues and problems; innovative and creative programs.

HP 447 CARDIOPULMONARY RESUSCITATION (CPR) INSTRUCTOR 1c-1l-1sh
Prerequisite: Basic CPR certification
Study of methods and skills necessary to certify instructors of cardiopulmonary resuscitation and multimedia first aid. Successful completion of requirements leads to certification by the American Health Association and the American Red Cross.

HP 450 CURRICULUM AND PROGRAMMING IN SEXUALITY EDUCATION 3c-0l-3sh
Topics include anatomy and physiology of the human reproductive tracts, development, birth defects, contraception, venereal disease, and abortion. Not for credit toward degrees in Biology.

HP 481 SPECIAL TOPICS var-1 to 3sh

HP 482 INDEPENDENT STUDY var-3sh

HP 493 INTERNSHIP var-3 to 12sh
Educational opportunity which integrates classroom experience with practical experience in community service agencies, industrial, business, or governmental organizations. Junior standing required.

IM: INFORMATION MANAGEMENT
Department of Finance and Management Information Systems
College of Business

IM 241 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS 3c-0l-3sh
Study of management information systems and their design and implementation. General systems theory, computer hardware, and programming are emphasized then integrated to demonstrate how an MIS is developed.

IM 245 INTRODUCTION TO MICROCOMPUTERS 3c-0l-3sh
Prerequisites: IM241
This course demonstrates how to utilize the microcomputer in business. Topics will include hardware, operating systems, word processing, spreadsheets, database, and BASIC.

IM 251 BUSINESS SYSTEMS ANALYSIS AND DESIGN 3c-0l-3sh
Prerequisite: IM241
This course involves teaching the tools and techniques required for the analysis and the design of business systems. The major steps in the system's development life cycle are presented along with practical applications from the major subsystems of typical business organizations. Issues related to personnel, hardware, software, and procedures are explored as students work individually and in project teams to solve typical business application problems.

IM 255 BUSINESS APPLICATIONS IN COBOL 3c-0l-3sh
Prerequisite: IM 241 and AG 201
This course introduces the student to the COBOL programming as it applies to business organizations and their applications. Structured COBOL concepts and methods are taught as the student learns how to solve business problems using computers. The student will be involved using files, reports, and tables to produce a variety of outputs utilized in operating and managing business activities.

IM 260 BUSINESS COMPUTER APPLICATION PROJECT 3c-0l-3sh
Prerequisites: IM255
Provides each student an opportunity to utilize skills and concepts presented in previous courses in the planning, design, and implementation of a comprehensive case study involving computerized business applications. Students will work in teams and individually in performing tasks that are necessary to solve each problem assigned. These tasks will include systems analysis, systems, design, programming, testing, and implementing and documenting simulated business problems.

IM 350 BUSINESS SYSTEMS TECHNOLOGY 3c-0l-3sh
Prerequisite: CO220 or IM255
Student is taught fundamental and advanced concepts of computer hardware and a procedure for evaluation and acquisition of computer hardware.

IM 370 ADVANCED COBOL 3c-0l-3sh
Prerequisites: CO 220, upper division students only
Corequisite: IM 350
Advanced COBOL is a continuation of introductory COBOL with an emphasis on structured methodology of program design, development, testing, implementation, and documentation of common business-oriented applications. An attempt is made to follow the guidelines of the DPMA in the development, presentation, and evaluation of standards pertaining to this course. It includes a heavy emphasis on the techniques and concepts of the table processing, file organization and processing alternatives, internal and external sorting, sub-routines, and application development for both the batch and on-line systems.

IM 381 FORMS DESIGN AND CONTROL 3c-0l-3sh
Prerequisite: IM 241 or by instructor's permission
Study of all data collection, transmission of data, processing of data, and retrieval of data forms. Microfiche and COM forms design are included.

IM 382 AUDITING FOR EDP SYSTEMS 3c-0l-3sh
Prerequisites: AG 201, IM 241, upper division students only
Emphasizes the responsibility of the systems analyst to include in systems design the proper management and financial controls and audit trails in business information systems. The design of control for application programs and systems is covered. Audit software packages are examined.

IM 450 DATABASE THEORY AND APPLICATION 3c-0l-3sh
Prerequisites: IM 370, upper division students only
After learning data structures, the student will then apply them to CODASYL compatible database management systems, TOTAL, and IBM's database management system. Student must develop and use a database as part of requirement.

IM 451 SYSTEMS ANALYSIS 3c-0l-3sh
Prerequisites: IM 350, IM 255, or C0 220, upper division students only
Develops an understanding of concepts and techniques involving conventional and structured approaches to analyzing problems of business information systems and systems definition feasibility, as well as quantitative and evaluative techniques of business information systems analysis.

IM 470 SYSTEMS DESIGN 3c-0l-3sh
Prerequisite: IM 451
Students learn tools and techniques for design of a business system. Along with classroom discussions of principles and techniques for analyzing, designing, and constructing the system, students will formulate system teams to analyze the problems of an existing business information system, to design an improved system, and to control implementation of a new system.

IM 480 DISTRIBUTED BUSINESS INFORMATION SYSTEMS 3c-0l-3sh
Prerequisite: IM 350, upper division students only
Study of the techniques involved in planning, design, and implementation of distributed processing systems. Distributed marketing, financial, and corporate accounting systems are included.

IM 481 SPECIAL TOPICS

IM 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

IM 493 INTERNSHIP IN MIS var-3 to 12sh
Prerequisites: IM 370, consent of department chairperson and dean.
Positions with participating business, industry, or governmental organizations provide the student with experience in systems analysis.

NOTE: Internship IM 488 can be taken, if the student qualifies, as a general elective. It does not fulfill the major-area elective requirement.

JN: JOURNALISM

Department of Journalism
College of Humanities and Social Sciences

JN 105 JOURNALISM AND THE MASS MEDIA 3c-0l-3sh
Prerequisite: EN 101
A critical examination of roles-goals of newspapers, magazines, radio, and television as they affect American society socially, politically, and economically.

JN 106 BASIC JOURNALISTIC SKILLS 3c-0l-3sh
Prerequisite: EN 101
Required for journalism majors but open to all students. Emphasis on grammar, punctuation, spelling, AP Stylebook, copyediting, headlines, and accuracy.

JN 120 JOURNALISTIC WRITING 3c-0l-3sh
Prerequisite: EN 101, JN 106
Emphasis on intelligent use of writing ability in a journalistic style and understanding of the why of journalism and mass media. This course practices and improves writing skills for all news media, print and broadcast.

JN 223 PHOTOJOURNALISM 3c-0l-3sh
Prerequisites: Junior/senior standing
Introduction to still photography for news media. Includes preparation of a portfolio and learning of specialized processing techniques for high-speed work.

JN 321 FEATURE WRITING 3c-0l-3sh
Prerequisites: JN 105, JN 120
Designed for the student who might work in journalism or who might wish to write on a part-time or free-lance basis.

JN 323 MANAGEMENT IN MASS COMMUNICATIONS 3c-0l-3sh
Prerequisites: JN 493, or field experience
Attention given to the process of advancement to management positions in the advertising, journalism, and public relations industries.

JN 326 PUBLIC RELATIONS I 3c-0l-3sh
Prerequisites: JN 105, JN 120
Introduces students to the principles, practices, programs, and possibilities in the various areas of public relations.

JN 327 LAYOUT DESIGN AND PRODUCTION 3c-0l-3sh
Prerequisite: JN 105
Provides basic techniques and theories of layout design and production, including typography, headlines, copyfitting, newspaper design and layout, photo cropping, etc.

JN 328 NEWS REPORTING 3c-0l-3sh
Prerequisites: JN 105, JN 120, junior/senior standing
Includes instruction in writing the news story, preparing copy, interviewing, covering special events, and similar reporting activities.

JN 337 EDITING 3c-0l-3sh
Prerequisites: JN 105, JN 120
Stresses basic practices such as copyediting and headline writing while also focusing on guidelines for improving accuracy, clarity, transition, spelling, and punctuation of copy. Students use wire service stylebook extensively.

JN 338 NEW ANALYSIS 3c-0l-3sh
Prerequisites: JN 105, junior/senior standing
A current events course, this is a critical study of news and its relationship to the mass media and the public. Seminar and discussion format.

JN 343 HISTORY OF THE AMERICAN PRESS 3c-0l-3sh
Prerequisites: JN 105, JN 120
Traces the development of the American press from its colonial roots. Emphasis on the role of the press in political and social development.

JN 344 ISSUES & PROBLEMS 3c-0l-3sh
Prerequisites: JN 105, JN 120
Students examine critical case histories of ethical and professional situations and circumstances in the mass communication industry in a lecture and discussion format.

JN 345 SPORTS JOURNALISM 3c-0l-3sh
Prerequisite: JN 120
Emphasizes skills for covering, writing, and editing of sports and introduces students to specific practices in newspaper, radio-TV, and sports information work.

JN 346 ADVANCED REPORTING 3c-0l-3sh
Prerequisite: JN 328
Designed for the student seeking a career as a working journalist, this course refines basic reporting and deals with more sophisticated techniques and coverage.

JN 347 JOURNALISM LAW 3c-0l-3sh
Prerequisites: JN 328, junior/senior standing
Open to nonmajors by permission of the instructor. Survey of the major Supreme Court and state court rulings governing the mass media, especially the news media. Areas include libel, antitrust, free press/fair trial, privacy. Approach is nontechnical.

JN 348 THE EDITORIAL PAGE 3c-0l-3sh
Prerequisite: Junior/senior standing
Emphasis on the writing of vigorous but thoughtful and fair editorials. Study of contemporary practice and policy on letters to the editor, columnists, cartoons, the op-ed page.

JN 349 PUBLIC AFFAIRS REPORTING 3c-0l-3sh
Prerequisites: JN 105, JN 120, JN 328
This seminar course covers the specialized field of reporting government and public service beats. Techniques and sources are covered in lecture, demonstration, and through guest speakers.

JN 350 ADVERTISING WRITING 3c-0l-3sh
Prerequisite: Instructor permission
This is a basic course in the preparation of advertising copy and continuity for all media. It is a combination of lecture and laboratory course. Enrollment is limited to 15 upperclass majors per semester.

JN 351 SCIENCE AND ENVIRONMENTAL REPORTING 3c-0l-3sh
Prerequisite: JN 328
Designed for advanced students who plan to spend a significant portion of their professional lives writing about science and the environment. Presumes advanced journalism skills and a sophisticated knowledge of science gained from at least 16 to 20 hours of science courses.

JN 390 PUBLIC RELATIONS II 3c-0l-3sh
Prerequisite: JN 326
A public relations writing class that includes assignments such as releases, features, newsletters, reports, biographies, rewrites, hometown stories, copyediting, interviewing, research, and special projects.

JN 391 PRESENTATION MAKING 3c-0l-3sh
Prerequisite: Junior/senior standing
Gives the student practice in writing and making oral presentations based on public relations cases and problems. Familiarizes the student with problem solving and small group communication skills necessary for those working in the area of public affairs.

JN 392 PROBLEM SOLVING IN PR 3c-0l-3sh
Prerequisite: Junior/senior standing
Introduces students to techniques for analyzing and tracking information flow in organizations. Introduces students to creative problem-solving techniques which are standard practice in corporate research groups.

JN 393 DOCUMENT DESIGN I 3c-0l-3sh
Prerequisite: Junior/senior standing
Teaches students advanced principles of document design and gives them the opportunity to apply techniques of rhetorical/stylistic analysis, general problem solving, and holistic information display to a wide variety of writing formats used in business, industry, and government.

JN 394 DOCUMENT DESIGN II 3c-0l-3sh
Prerequisite: Junior/senior standing
Gives students advanced work in preparation of substantial corporate and government documents such as annual reports, lengthy project reports, and research reports, etc. Emphasizes skills in research of public and government documents, data analysis and problem solving, holistic information display, writing, and editing.

JN 493 INTERNSHIP var-3 to 12 sh
Prerequisites: JN 105, JN 106, JN 120, JN 328, junior/senior standing, department approval
On-the-job training opportunities in journalism and related areas. Maximum of 6 sh may be applied to 30 sh minimum of major.

JN 481 SPECIAL TOPICS var-1 to 3sh
These courses vary from semester to semester, covering a number of journalism specialties. From time to time they are converted to permanent course numbers.

JN 482 INDEPENDENT STUDY var-1 to 6sh
Prerequisite: Departmental approval
Opportunities for independent study that goes beyond the usual classroom activities. Approval of department chairperson required.

LA: LATIN

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

LA 151 LATIN I 3c-0l-3sh
For beginning students; pronunciation, reading, oral, and written communication are the objectives. In grammar the case system of the Latin noun is begun.

LA 152 LATIN II 3c-0l-3sh
Continuation of Latin I, with the same objectives. In grammar the case system of the noun is completed.

LA 251 LATIN III 3c-0l-3sh
Continued training in basic skills, with the possible addition of the study of specific topics; consult the department for topics. In grammar most tenses of the Latin verb are studied.

LA 252 LATIN IV 3c-0l-3sh
Continuation of Latin III. In grammar more tenses of the verb are studied. The readings become short selections from Latin literature.

LA 351 ADVANCED LATIN I 3c-0l-3sh
Reviews grammar in depth; analyzes the structure of the language. Written themes are not required. Selections from Latin prose are read for knowledge of their content and for developing knowledge of the structure of the language.

LA 352 ADVANCED LATIN II 3c-0l-3sh
Continuation of Latin 351. Selections are from poetry this semester.

LA 361 DEVELOPMENT OF ROMAN CULTURE AND LITERATURE 3c-0l-3sh
Latin poetry and history will be read to show the influence of political and social ideas on literature; emphasis will be on the contrast between the Republican and Imperial periods. Some reading will be in Latin; most will be in English.

LA 362 LATIN CONVERSATION AND COMPOSITION 3c-0l-3sh
Aims at the ability to speak Latin on a conversational level and to write grammatically correct Latin prose.

LA 371 SURVEY OF LATIN LITERATURE I 3c-0l-3sh
Comprehensive view of Latin literature from Ennius through the Augustan Age.

LA 372 SURVEY OF LATIN LITERATURE II 3c-0l-3sh
Comprehensive view of Latin literature from the Silver Age to the Middle Ages.

LA 482 INDEPENDENT STUDY var-1 to 3sh
An opportunity to engage in an in-depth analysis of some topic dealing with the Latin language and culture through consultation with a faculty member. Permission is required.

LB: LIBRARY

The University Libraries
Academic Affairs Division

LB 151 INTRODUCTION TO LIBRARY RESOURCES var-1sh
A lecture/laboratory course (14 one-hour classes) which provides an introduction to the resources of a university library, how those resources are organized, and how to effectively use those resources.

LR: INDUSTRIAL AND LABOR RELATIONS

Department of Industrial and Labor Relations
College of Humanities and Social Sciences

LR 426 CASE STUDIES IN LABOR-MANAGEMENT RELATIONS 3c-0l-3sh
In-depth study of daily labor-management relationships in a variety of organizational settings through utilization of case study technique. Focuses on a problem-solving approach to the contract administration component of the labor-management relationship.

LR 457 LABOR AND BUSINESS IN POLITICS 3c-0l-3sh
In-depth study and analysis of labor and business involvement in politics. Special attention to involvement of labor and business in Pennsylvania politics as well as to the relationship between the two competing groups - conflict or cooperation?

LR 480 PRINCIPLES AND PRACTICES OF COLLECTIVE BARGAINING 3c-0l-3sh
Role, function, and authority of negotiation committees, techniques of negotiation, the negotiations agreement, the mediation process, and the arbitration process will be analyzed through mainly a case study approach.

LR 481 SPECIAL TOPICS IN INDUSTRIAL AND LABOR RELATIONS 3c-0l-3sh
Advanced, innovative, or exploratory topics in Industrial and Labor Relations.

LR 499 INDEPENDENT STUDY var-1 to 3sh
Independent reading and research under the direction of a faculty member.

MA: MATHEMATICS

Department of Mathematics
College of Natural Sciences and Mathematics

MA 100 BASIC ALGEBRA 3c-0l-3sh
Note: A student may not take MA100 Basic Algebra after successfully completing MA 110 or a calculus course without the written approval of the Mathematics Department chairperson. A basic course in algebra including factoring, exponents and radicals, systems of linear equations, complex fractions, and inequalities. Designed for those students who lack the basic algebraic skills required in MA 110 Elementary Functions. This course will not meet general education math requirements.

MA 101 FOUNDATIONS OF MATHEMATICS 3c-0l-3sh
Introduces logic and mathematical way of analyzing problems; develops an appreciation for nature, breadth, and power of mathematics and its role in a technological society and introduces useful mathematics or mathematics related to student interest. Possible topics include logic, problem solving, number theory, linear programming, probability, statistics, intuitive calculus, introduction to computers, mathematics of finance, game theory.

MA 102 FINITE MATHEMATICS 3c-0l-3sh
Prerequisite: Four years of high school mathematics or a college mathematics course. Credit toward graduation will not be given to anyone with credit in any course beyond calculus. An informal approach to practical applications of mathematics. Fundamental concepts of enumeration, matrices, linear systems, predicate calculus, probability, and series will be introduced and used in considering mathematical models. Calculators or computer packages may be used in solving mathematical problems.

MA 110 ELEMENTARY FUNCTIONS 3c-0l-3sh
Note: A student may not take MA 110 Elementary Functions after successfully completing a calculus course without the written approval of the Mathematics Department chairperson. For students not prepared to begin the study of calculus; topics include polynomial, exponential, logarithmic, and trigonometric functions.

MA 121 CALCULUS I FOR BUSINESS, NATURAL AND SOCIAL SCIENCES — each 4c-0l-4sh
Note: A student may not take MA 121 Calculus I for Business, Natural, and Social Sciences, and Business after successfully completing another calculus course without the written permission of the Mathematics Department Chairperson.
Prerequisite: MA 110 or equivalent high school preparation.
Introduces non-Math major to analytic geometry, elementary functions (including logarithmic and exponential functions), central ideas of the calculus (limit, derivative, and integral), applications of derivatives to business, social and natural sciences.

MA 122 CALCULUS II FOR BUSINESS, NATURAL AND SOCIAL SCIENCES — 4c-0l-4sh
Applications of integrals to business, natural and social sciences, functions of several variables, trigonometric functions, sequences and series, numerical methods, differential equations.

MA 123 CALCULUS I FOR PHYSICS AND CHEMISTRY — 4c-0l-4sh
Prerequisites: High school algebra, geometry, and trigonometry.
Functions, limits, continuity, derivatives, application of the derivative, integral, and applications of the integral. (Trigonometric and inverse trigonometric functions are included throughout the course.)

MA 124 CALCULUS II FOR PHYSICS AND CHEMISTRY — 4c-0l-4sh
Logarithmic and exponential functions, techniques of integration, sequences and series, differential calculus of functions of several variables, multiple integrals, line integrals, surface integrals, differential equations with application to physical problems.

MA 127/128/227 CALCULUS I, II, AND III — each 4c-0l-4sh
Prerequisite: Permission of the Mathematics Department.
These courses stress the theory of the calculus as well as the application in problem solving. Topics to be included are Calculus I — real numbers, an introduction to analytic geometry, functions, limits and continuity, derivatives and applications, the differential, and antidifferentiation; Calculus II — definite integrals and applications, logarithmic and exponential functions, trigonometric and inverse trigonometric functions, polar coordinates, hyperbolic functions, indeterminate forms, improper integrals and Taylor's formula; Calculus III — vectors in the plane, parametric equations, vectors in three-dimensional space, solid analytic geometry, differential calculus of functions of several variables, directional derivatives, gradients, applications of partial derivatives, infinite series.

MA 151 MATHEMATICS FOR ELEMENTARY TEACHERS I — 3c-0l-3sh
Topics included are sets, concepts of logic, mathematical systems, systems of numeration, developing the set of integers, rational numbers, and real numbers.

MA 152 MATHEMATICS FOR ELEMENTARY TEACHERS II — 3c-0l-3sh
Prerequisite: MA 151
Topics included are sentences in one variable, sentences in two variables, nonmetric geometry, metric geometry, coordinate geometry, introduction to statistics and probability, computers, and calculators.

MA 171 INTRODUCTION TO LINEAR ALGEBRA — 3c-0l-3sh
Introduction to vector spaces, linear transformations, determinants, and matrix algebra. Topics are presented in a direct and intuitive approach.

MA 214 PROBABILITY AND STATISTICS FOR BUSINESS MAJORS — 3c-0l-3sh
Designed to introduce the study of probability theory, discrete random variables and probability distributions, empirical frequency distributions, theoretical frequency distributions, statistical investigations and sampling, and sampling distributions.

MA 342 ADVANCED CALCULUS FOR APPLICATIONS 4c-0l-4sh
Prerequisite: MA 241
This course deals with the application of mathematics to problems of science. Emphasis is placed on the three phases of such an application and on the development of skills necessary to carry out each step: (a) translation of the given physical information to a mathematical model; (b) treatment of the model by mathematical methods; (c) interpretation of the mathematical result in physical terms. Topics included are vector calculus, integral theorems, fourier series, partial differential equations, and the Laplace transformation.

MA 353 THEORY OF NUMBERS 3c-0l-3sh
Prerequisite: MA 271
Divisibility, congruences, primitive roots, number theoretic functions, diophantine equations, continued fractions, quadratic residues.

MA 355 FOUNDATIONS OF GEOMETRY I 3c-0l-3sh
Prerequisites: MA 171, 271
Studies various groups of transformations and geometries associated with these groups in the Euclidean plane. The Euclidean Similarity, Affine and Projective Groups of Transformations are studied.

MA 216 PROBABILITY AND STATISTICS FOR NATURAL SCIENCES 4c-0l-4sh
Prerequisite: MA 121
Frequency distributions, measures of central tendency and variation, probability, probability distributions, sampling distributions. Hypothesis testing for means, variances, proportions. Correlation and prediction, regression, analysis of variance, and nonparametric statistics. Emphasis on applications.

MA 217 PROBABILITY AND STATISTICS 3c-0l-3sh
(For non-Math majors)
Frequency distributions, measures of central tendency, variation, elementary probability, sampling, estimation, testing hypotheses, correlation, and regression; emphasis on applications as opposed to theoretical development of topics.

MA 219 DISCRETE MATHEMATICS 3c-0l-3sh
Prerequisites: CO 110 and a two-semester calculus sequence
Topics include set algebra, mappings, relations, semigroups, groups, directed and undirected graphs, Boolean algebra, and propositional logic, with examples and applications of these to various areas of computer science. Emphasis placed on developing an intuitive understanding of basic structures rather than formal theories and influence of these topics on theory and practice of computing.

MA 241 DIFFERENTIAL EQUATIONS 3c-0l-3sh
Prerequisite: MA 122 or 124 or 227
Emphasis is placed on techniques of solution and elementary physical applications. A thorough study is made of differential equations classified as order one-degree one, linear, and nonhomogeneous. Solution techniques involving reduction of order techniques, the differential operator, and infinite series are introduced.

MA 271 INTRODUCTION TO ALGEBRAIC STRUCTURES 3c-0l-3sh
Gives student basic ideas of contemporary mathematics. Includes mathematical logic, algebra of sets, equivalence relations and partitions of sets, functions and fundamentals of group theory. Methods of proof in area of abstract mathematics.

MA 317 INTRODUCTION TO PROBABILITY AND STATISTICS 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Introduces students to elementary concepts of probability and statistics which will enable them to analyze data, make predictions, and determine which concepts may be used with children.

MA 356 FOUNDATIONS OF GEOMETRY II 3c-0l-3sh
Prerequisite: MA 355
An extension of the topics included in MA 355. The real projective plane is introduced and the analytic geometry of this plane.

MA 363 MATHEMATICAL STATISTICS I 3c-0l-3sh
Prerequisite: MA 122 or 124 or 227
Probability theory necessary for an understanding of mathematical statistics is developed. Applications of set theory to models, combinations and permutations, binomial, Poisson and normal distributions, expected values, and moment generating functions.

MA 364 MATHEMATICAL STATISTICS II 3c-0l-3sh
Prerequisite: MA 363
Multivariate distributions, change of variable technique, Chisquare distribution, estimation, confidence intervals, hypothesis testing, contingency tables, goodness of fit. Practical applications are used to aid in the development.

MA 366 PREPARATION FOR ACTUARIAL EXAMINATIONS 1c-0l-1sh
Prerequisites: MA 171 and calculus sequence
This course provides an introduction to the actuarial profession and helps the student prepare for the first actuarial examinations. The examination preparation consists of studying sample actuarial examinations and related material. The student is required to take the actuarial examination. The student should be aware that for most students, considerable study beyond the requirements of this one-credit course will be required in order to pass the actuarial examinations.

MA 371 LINEAR ALGEBRA 3c-0l-3sh
Prerequisites: MA 171, 271
Vector spaces and linear transformations are studied in a theoretical setting. Also canonical forms and multilinear algebra are studied.

MA 417 STATISTICAL APPLICATIONS 3c-0l-3sh
(For non-Math majors)
Prerequisite: MA 214, 216, or 217
Using computer programs, a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction will be reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. Emphasis is on use of the computer and interpretation of computer print-outs, along with understanding techniques employed. No computer knowledge is necessary.

MA 418 SAMPLING SURVEY THEORY AND ITS APPLICATION 3c-0l-3sh
Prerequisites: (For non-Math majors), MA 214, 216, or 217
Directed to the student who is or will be doing quantitative research and will be commissioning large-scale surveys and will be evaluating the results. Sampling techniques and statistical principles underlying their use will be introduced. Consideration to the practical problems associated with implementation.

MA 420 PRE-CALCULUS MATHEMATICS I 3c-0l-3sh
Prerequisite: MA 152; Elementary Education Concentration
Examines the function concept as applied to elementary real number functions and graphing techniques for these functions. Topics include real number functions such as absolute value, step, linear, quadratic, and other polynomial functions, trigonometric and other periodic functions, exponential logarithmic functions, and all other inverse functions. Students will examine curricular materials that develop function concepts in Grades K-8.

MA 421 ADVANCED CALCULUS I 3c-0l-3sh
Prerequisites: MA 124 or MA 227, MA 271
Study of set theory, real number system, functions topology of cartesian space, sequences, convergence and uniform convergence, continuity, and uniform continuity.

MA 422 ADVANCED CALCULUS II 3c-0l-3sh
Prerequisite: MA 421
Includes the study of convergence sequences in Rn, global properties of continuity, uniform continuity, differentiation of Rn, Reimann integrals, and infinite series.

MA 423-424 COMPLEX VARIABLE I AND II each 3c-0l-3sh
Prerequisite: MA 124 or 227
Introduction to the theory of functions of a complex variable: topics included are elementary functions, analytic functions, conformal mapping, integration, series, and application.

MA 427 INTRODUCTION TO TOPOLOGY 3c-0l-3sh
Prerequisite: MA 271
Study of sets, functions, continuity, compactness, the separation axioms, and metric spaces; application of topology to analysis is demonstrated.

MA 445 PROGRAMMING MODELS IN OPERATIONS RESEARCH 3c-0l-3sh
Prerequisite: Two-semester sequence of calculus
Development of deterministic mathematical models for managerial and social sciences with relevant computational techniques.

MA 446 PROBABILISTIC MODELS IN OPERATIONS RESEARCH 3c-0l-3sh
Prerequisites: Two-semester sequence of calculus, MA 363
Development of probabilistic mathematical models for managerial and social sciences with relevant computational techniques.

MA 450 MATHEMATICS FOR EARLY CHILDHOOD 3c-0l-3sh
Prerequisite: MA 151, Elementary Education concentration
Study of child-centered, activity-oriented mathematics program for early childhood education. Students gather and construct manipulative materials and become familiar with commercially produced materials. Pre-number activities, number activities, numeration, operations on whole numbers, fractional numbers, geometry, measurement, problem solving.

MA 452 SEMINAR IN TEACHING ALGEBRA var-1 to 4sh

MA 453 SEMINAR IN TEACHING GEOMETRY var-1 to 4sh

MA 454 SEMINAR IN TEACHING GENERAL MATHEMATICS var-1 to 4sh
Seminars are designed for pre-student teacher. Students in each class will gain insights into the problems in teaching each topic and become aware of the materials available and methods of instruction geared to the special type of student. Education majors only.

MA 456 PRINCIPLES OF GEOMETRY I 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Students become acquainted with an informal, intuitive approach to geometry. Activities and materials for teaching geometrical concepts to children are an integral part of the course.

MA 457 INTRODUCTION TO NUMBER THEORY 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Introduction to topics of elementary number theory including divisibility, prime numbers, factorization, modular arithmetic, problem solving, and place of number theory in the elementary school curriculum. Students will examine many number theory activities which can help to strengthen skills with basic facts in an interesting, nonroutine setting.

MA 458 INTRODUCTION TO LOGIC AND LOGICAL GAMES 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Introduction to some of the basic ideas, terminology, and notation of mathematical logic and Boolean algebra as well as games of strategy that involve logic. In addition, an investigation of how logic is taught and used in various programs for the elementary school.

MA 459 COMPUTER-RELATED TOPICS IN THE ELEMENTARY AND MIDDLE SCHOOL 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Provide teachers with concepts and techniques necessary to teach computer-related topics to children. Participants will work with elementary school children throughout the semester.

MA 465 TOPICS IN STATISTICS 3c-0l-3sh
Prerequisite: MA 364
Correlation and regression from applied and theoretical points of view, bivariate and multivariate normal distribution, analysis of variance, nonparametric methods. Practical problems involving statistical techniques and use of computer statistical packages. Knowledge of computer programming is not required.

MA 471 BASIC CONCEPTS OF ALGEBRA 3c-0l-3sh
Prerequisites: MA 152, Elementary Education concentration
Concepts of basic algebraic structures such as group, ring, integral domain, field, and vector space are studied within the context of the mathematical maturity of the student. Other topics include relations and functions, polynomials and polynomial equations, systems of equations, and inequalities. Consideration given to development of these concepts in the mathematics curriculum.

MA 476 ABSTRACT ALGEBRA I 3c-0l-3sh
Prerequisites: MA 171, 271
Development of theory of integral domains, fields, rings, and groups; designed to develop student's power to think for himself and to improve ability to construct formal proofs.

MA 477 ABSTRACT ALGEBRA II 3c-0l-3sh
Prerequisite: MA 476
Designed to have student continue study of algebra by use of axiomatic method; Euclidean domains; polynomial domains and extension fields included; interrelationships between these structures and simpler structures, particularly groups and rings, are developed as in study of Galois group of a polynomial and in an introduction to Galois Theory.

MA 481 TOPICS IN MATHEMATICS var-1 to 3 sh
(Credit toward Math major)

MA 482 TOPICS IN MATHEMATICS var-1 to 3 sh
(Credit toward graduation)

MA 483 TOPICS IN MATHEMATICS var-1 to 3 sh
(Credit for non-Math majors only)

MA 490 INDEPENDENT STUDY var-1 to 3 sh

MA 493 INTERNSHIP IN MATHEMATICS var-3 to 12sh
Prerequisites: Completion of core curriculum, completion of application
Positions with participating companies or agencies provide students with experience in mathematics-related work under the supervision of the agencies and faculty. Requirements include one to three on-site consultations, two university consultations, completion of progress reports, and presentation of final cumulative paper.

MA 495 SEMINAR IN PREPARING A MATHEMATICS PAPER var-1 to 2sh
Prerequisite: Completion of the 18sh of the Mathematics Core courses
The course provides the student with the opportunity to study a topic of his/her choosing (with the help of the instructor, if necessary) and to prepare a written and oral presentation of his/her investigations. While searching for and working on the topic, the student is expected to read and use several mathematical journals and books. The student is encouraged to submit the finished paper for presentation at regional and national meetings of mathematics students and professional mathematicians.

MG: MANAGEMENT

Department of Management and Marketing
College of Business

NOTE: Management courses are only open to students in College of Business majors or as space permits, to students in other programs where the courses are requirements or established electives.

MG 300 HUMAN RESOURCE MANAGEMENT 3c-0l-3sh
Designed to recognize and evaluate the change to the behavioral science approach in the study of personnel administration. Topics include: recruiting and selection, training, management development, performance evaluation, communications, wage and benefit programs, and management-labor relations.

MG 311 HUMAN BEHAVIOR IN ORGANIZATIONS 3c-0l-3sh
Prerequisite: PC 101
Human problems of management. Basic ideas and theories from the behavioral sciences as they apply to human behavior in organizations are presented. Management solutions to problems resulting from individual-organization interaction are emphasized.

MG 360 MANAGEMENT AND PRODUCTION CONCEPTS 3c-0l-3sh
Prerequisite: Upper division students only (sophomore, junior, senior students only)
Analysis of the role and functions of management to include planning, organizing, staffing, directing, and controlling. Study of management in organizations with attention to tasks, functions, and to the contributions of various disciplines. Study of production management as an example of functional management; emphasis on acquisition, transformation, and distribution of physical materials. MG 360 emphasizes the qualitative approach to production. Those students who enroll in MG 360 may not also enroll in FS 360.

MG 390 PRINCIPLES AND PRACTICES OF MANAGEMENT 3c-0l-3sh
Examines quantitative and behavior models and theories used in managerial decision processes. Readings and case studies illustrate applications of management theories, models, and structure.

MG 400 WAGE AND SALARY ADMINISTRATION 3c-0l-3sh
Prerequisite: MG 300
Studies the policies and programs that help managers design and administer compensation systems for private and public sector enterprises. Includes motivation theories and practice designing of compensation systems. Usually taught in the spring semester.

MG 401 MANAGEMENT DEVELOPMENT AND TRAINING 3c-0l-3sh
Prerequisites: MG 300, MG 360
Principles, problems, and procedures in planning, organizing, directing, and controlling at all echelons of a business enterprise. Methods of improving and development of managerial skills are emphasized. Usually taught in the spring semester.

MG 402 SEMINAR IN HUMAN RESOURCE MANAGEMENT 3c-0l-3sh
Prerequisite: MG 300, graduating senior
Contemporary issues in personnel using case studies.

MG 410 DECISION MAKING IN BUSINESS 3c-0l-3sh
Prerequisites: Senior status and all Business Core subjects completed
Designed to give the student practice in developing solutions to business problems through the integration and application of the numerous theories covered in the functional areas.

MG 412 SMALL BUSINESS MANAGEMENT 3c-0l-3sh
Role of the entrepreneur and problems involved with managing a small business enterprise.

MG 481 SPECIAL TOPICS IN MANAGEMENT var-1-3sh
Covers advanced, innovative, or exploratory topics and disciplines within management. Specific content items developed by instructor. Credits may be applied to either required (by permission of department chairperson) or free electives in a student's program.

MG 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of departmental chairperson
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

MG 493 HUMAN RESOURCE MANAGEMENT INTERNSHIP var-3 to 12sh
Practical experience with a personnel office to develop knowledge and experience in the practical application of theory to actual problems in a nonclassroom setting. A maximum of 3 sh of internship in the student's major may be applied toward the management major area-elective requirements. Additional internship credit must be used as free electives only. Admission only by permission of the department chairperson.

MG 495 BUSINESS POLICY 3c-0l-3sh
Prerequisites: Completion of all Business Core requirements or permission (graduating senior)
A capstone case analysis course designed to give the student practice in applying business theories to the solution of management problems. An analysis of how top management determines policy and influences the philosophy and character of the company. To develop in the student a general management viewpoint that integrates the various functions of the organization.

MI: MARINE SCIENCE

Marine Science Consortium/Biology Department
College of Natural Science and Mathematics

MI 110 INTRODUCTION TO OCEANOGRAPHY var-3sh
Introduction to physical, chemical, biological, and geological aspects of oceans and methods and techniques of oceanography. Lab emphasis placed on at-sea assignments.

MI 211 FIELD METHODS IN OCEANOGRAPHY var-3sh
Prerequisite: MI 110 or consent of instructor
Familiarization with dynamic marine environment involving use and application of oceanographic instruments and sampling devices.

MI 212 NAVIGATION var-3sh
Prerequisite: Four years high school math or equivalent or consent of the instructor
Covers navigation, i.e., the art and science of safely bringing a vessel from one position to another in a body of water. Course divided into (1) brief historical background (2) navigation within sight of land, i.e., piloting; (3) navigation in the open sea, including electronic navigation methods.

MI 221 MARINE INVERTEBRATE ZOOLOGY var-3sh
Prerequisite: One year biology or consent of instructor
Study of marine invertebrates with emphasis on development, reproduction, structure, function, and classification of selected marine organisms.

MI 241 MARINE BIOLOGY var-3sh
Prerequisites: Botany and zoology or consent of instructor
Study of plant and animal life in marine environment with emphasis placed upon physical and chemical factors affecting biota.

MI 250 MANAGEMENT OF WETLAND WILDLIFE var-3sh
Prerequisites: None
The ecology and management of wetland wildlife, particularly of freshwater marshes and saltwater marshes. Special emphasis on ecosystem approach.

MI 260 MARINE ECOLOGY var-3sh
Prerequisite: One year of biology or consent of instructor
A course in ecology of marine organisms.

MI 270 SCUBA DIVING var-3sh
Prerequisites: Swimming ability and good health. (A standard diving physical form will be mailed to students electing the course.)
Students who complete course will receive a National Association of Underwater Instructors Diver Certificate.

MI 280 MARINE FIELD BIOLOGY var-3sh
Prerequisites: None
An introduction to basic principles of ecology and natural history of selected plants and animals in terrestrial, freshwater, and marine environments. Suitable for non-Science majors.

MI 331 CHEMICAL OCEANOGRAPHY var-3sh
Prerequisites: MI 110 and one year of chemistry
Treatment of oceanic chemical phenomena by sampling and laboratory analysis techniques.

MI 342 MARINE BOTANY var-3sh
In-the-field studies and laboratory analysis by instrumentation of marine and marine fringe plants in the Middle Atlantic Coast as exemplified by those found in the Cape Henlopen, Delaware, and Wallops Island, Virginia, areas.

MI 343 MARINE ICHTHYOLOGY var-3sh
Prerequisites: General Biology and/or consent of the instructor
A study of fishes. Specimens collected along Eastern Seaboard by students will be used to illustrate anatomy, physiology, and systematics of this major vertebrate group. Field collections will give student opportunity to observe relationships of these animals to the biotic and physical environment.

MI 344 ANATOMY OF MARINE CHORDATES var-3sh
Prerequisites: Six hours of biology including General Zoology
Designed to familiarize students with various aspects of marine chordates.

MI 345 MARINE ORNITHOLOGY var-3sh
Prerequisite: One year of Biology or consent of the instructor
Introduces student to avian fauna of seacoast and enables comparison with inland species. In addition to field work providing visual and vocal identification, lecture material will include information on distribution, behavior, physiology, and anatomy of birds.

MI 362 MARINE GEOLOGY var-3sh
Prerequisites: MI 110 and physical geology or consent of instructor
Studies of structural and sedimentary environments of continental shelf, slopes, and ocean basins and crustal structure of the earth and its relation to sedimentary record and geologic history of oceans.

MI 364 PHYSICAL OCEANOGRAPHY var-3sh
Prerequisites: MI 110, one year of physics, one semester of calculus and permission of the instructor
Course includes consideration of physical properties, mass and energy budgets, theory of distribution of variables; cause, nature, measurement, analysis, and prediction of tides, currents and waves; and basic instrumentation in the field.

MI 420 MARINE MICROPALEONTOLOGY var-3sh
Prerequisites: One year of geology and biology or consent of instructor
Deals with modern, living representatives of microorganisms important in fossil record with particular emphasis placed on taxonomy, morphology, evolution, and ecologic affinities of representative groups.

MI 431 ECOLOGY OF MARINE PLANKTON var-3sh
Prerequisite: One year of biology
Study of phytoplankton and zooplankton in marine and brackish environments. Qualitative and quantitative comparisons made between the planktonic populations of various types of habitats in relation to primary and secondary productivity.

MI 459 COASTAL GEOMORPHOLOGY var-3sh
Prerequisite: One year of geology
A study of coastal geomorphology with emphasis on Late Cenozoic and Pleistocene sea-level changes in response to worldwide continental glaciation. The student will participate in field studies of Pleistocene deposits and the weathering of these deposits.

MI 481 SPECIAL TOPICS var-3sh
Prerequisite: Instructor consent
Topics vary from session to session.

MI 500 PROBLEMS IN MARINE SCIENCE var-3sh
Graduate students or undergraduate students with advanced standing registering for this course may elect either of the following options.

Option A: Take a 200, 300, or 400 level MI course and complete, in addition to regular course requirements, a project in the area under direction of instructor.

Option B: Complete an independent research project. A research proposal must be approved by the Academic Committee of M.S.C. in advance of the time research is to be pursued.

MK: MARKETING

Department of Management and Marketing
College of Business

NOTE: Marketing courses are open only to students in College of Business majors or as space permits, to students in other programs where the courses are requirements or established electives.

MK 320 PRINCIPLES OF MARKETING 3c-0l-3sh
Prerequisite: Sophomore, junior, senior standing only
Study of those activities necessary to the design, pricing, promotion, and distribution of goods and services for use by organizations and ultimate consumers.

MK 321 CONSUMER BEHAVIOR 3c-0l-3sh
Prerequisites: MK 320 and PC 101
Survey of noteworthy contributions of behavioral science and research of consumer purchasing and decision-making process, with particular attention to formal and informal influence patterns.

MK 420 MARKETING MANAGEMENT 3c-0l-3sh
Prerequisites: MK 320 and MK 321
Analysis of marketing and operational problems and policies involved in planning, organizing, coordinating, and controlling a business from a total marketing program.

MK 421 MARKETING RESEARCH 3c-0l-3sh
Prerequisites: MK 320 and FS 215
Nature, methods, analysis, and application of present-day marketing research techniques utilized in the solution of practical marketing problems.

MK 422 SEMINAR IN MARKETING 3c-0l-3sh
Prerequisites: MK 420 and MK 421, graduating senior
A terminal course designed for majors in marketing; considers current literature in the field, case problems ertaining to the total marketing effort, and actual problems of local companies.

MK 430 INTERNATIONAL MARKETING 3c-0l-3sh
Prerequisite: MK 320
International marketing is analyzed with consideration given to the significance of government regulations; organization structures of export and import enterprises; and credit policies.

MK 431 INDUSTRIAL MARKETING 3c-0l-3sh
Prerequisite: MK 420
Concerned with the major activities involved in the marketing of industrial goods and services, including the industrial marketing system, marketing information needs of the industrial firm, industrial marketing implementation and control, and channel, pricing, product, and promotional strategies for industrial goods. Usually taught in the spring semester.

MK 432 BUSINESS AND SOCIETY 3c-0l-3sh
Overview of the interactions between business and the larger social system in which it operates. Considers the problems, solutions, and future directions of societal issues and their relationships to the business environment. Topics discussed include consumerism, the morality of advertising, self-regulation, pollution and ecology, overpopulation, government regulation, and the social and ethical responsibilities of business and industry.

MK 433 ADVERTISING 3c-0l-3sh
Prerequisite: MK 320
Introduction to the principles, practices, and creations of advertising. Use of various media, legal, economic, social, and ethical aspects of advertising are also considered. Usually taught in the fall semester.

MK 481 SPECIAL TOPICS IN MARKETING 3c-0l-3sh
Covers advanced, innovative, or exploratory topics and disciplines within marketing. Specific content items developed by instructor. Credits may be applied to either required (by permission of departmental chairperson) or free electives in a student's program.

MK 482 INDEPENDENT STUDY var-3sh
Prerequisite: Consent of departmental chairperson and dean, College of Business
Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of a senior faculty member.

MK 493 MARKETING INTERNSHIP var-3 to 12sh
Practical experience in the marketing field to develop knowledge and experience in the practical application of theory to actual problems in a nonclassroom situation. A maximum of 3 sh of internship in the student's major may be applied toward the marketing major-area elective requirements. Additional internship credit must be used as free electives only.
Admission only by permission of the department chairperson.

MS: MILITARY SCIENCE

Department of Military Science

MS 101 WORLD MILITARY HISTORY 2c-1l-2sh
A study of the relationship and impact of warfare and military forces on the development of the world. This includes the interaction of military forces on the social, economical, and technological development of the world as well as a study of strategy, tactics, and personalities involved in the major wars. Also, see Leadership Laboratory.

MS 102 AMERICAN MILITARY HISTORY 2c-1l-2sh
Study of the evolution of American military institutions and policies and their relationship to society. Included will be studies of the major wars, their strategy, and their impact as well as the personalities involved. Also, see Leadership Laboratory.

MS 203 FUNDAMENTALS OF TACTICAL OPERATIONS, TECHNIQUES OF LEADERSHIP, AND WEAPONS CHARACTERISTICS 2c-1l-2sh
Organization, techniques, resources, and capabilities involved in conducting small unit tactical operations. Emphasis is on leadership, organization, and management techniques needed to cause a group of people to accomplish specific objectives. Characteristics of military weapons systems are taught. Students serve as leaders in Leadership Labs.

MS 204 NATIONAL SECURITY AND FUNDAMENTALS OF MILITARY TOPOGRAPHY 2c-1l-2sh
Study of national security concepts, policies, and the national decision-making process with emphasis on national resources, national will, and economic factors. Included will be a study of nuclear and conventional response options. Fundamentals of military topography including the use of military maps to determine topographic features, to conduct land navigation, and to perform terrain analysis will be covered. Also, see Leadership Laboratory.

MS 305 FUNDAMENTALS OF LEADERSHIP AND MODERN LEARNING/TEACHING RELATIONSHIP 3c-1l-3sh
Study in practical application of principles of Leadership /Management as applied in classroom and field to include case studies in psychological, physiological, and sociological factors which affect human behavior; individual and group solution of leadership problems common to small units. Also, see Leadership Laboratory.

MS 306 STUDY OF ADVANCE LEADER PLANNING AND EXECUTION OF MODERN COMBAT OPERATIONS 3c-1l-3sh
Analysis of leader's role in directing and coordinating efforts of individuals and small units in execution of offensive and defensive tactical missions, to include command and control systems, the military team, and communications techniques. Also, see Leadership Laboratory.

MS 407 MANAGEMENT OF THE MILITARY COMPLEX TO INCLUDE FUNDAMENTALS OF MILITARY AND INTERNATIONAL LAW 3c-1l-3sh
Study of the various managerial elements needed to effectively control a military organization and their techniques used to accomplish these functions. Studies in military law and international law prepare the students for their legal responsibilities. Also, see Leadership Laboratory.

MS 408 SEMINAR IN MILITARY ANALYSIS AND MANAGEMENT 3c-1l-3sh
Contemporary analysis of use of military in world affairs to include importance of strategic mobility and neutralization of insurgent movements. Selected management problems and situations will be presented as they relate to military justice, administration, and obligation and responsibilities of an officer. Also, see Leadership Laboratory.

LEADERSHIP LABORATORY (one afternoon per week) var-0sh
A practical experience designed for the attainment and application of leadership principles. Concurrently scheduled in conjunction with all Military Science courses, it provides for practical challenges in personal accomplishment, both physical and mental, and for development of team work and leadership.

SUMMER CAMP var-0sh
Students attend a 6-week summer camp upon completion of the first year of the Advanced Course. Time at camp is devoted to practical application of principles and theories taught during the preceding school years. While at camp, each student receives lodging, subsistence, uniforms, medical care, reimbursement for travel, and pay in amount of one-half pay of second lieutenant per month.

MT: MEDICAL TECHNOLOGY

Department of Allied Health Professions
College of Human Ecology and Health Sciences

MT 494 CLINICAL MICROBIOLOGY var 6-10sh
Identification and clinical pathology of bacteria, fungi, viruses, and parasites. Techniques to isolate, stain, culture, and determine antimicrobial susceptibility. Instrumentation; quality control.

MT 495 CLINICAL CHEMISTRY var 7-10sh
Enzymology, endocrinology, biochemistry of lipids, carbohydrates and proteins, metabolism of nitrogenous end products, physiology and metabolism of fluids and electrolytes, and toxicology as related to the body and diseases. The technical procedures include colorimetry, spectrophometry, electrophoresis, chromatography, automation, and quality control.

MT 496 CLINICAL HEMATOLOGY/COAGULATION var 4-7sh
The composition and function of blood; diseases related to blood disorders; the role of platelets and coagulation. Manual and automated techniques of diagnostic tests for abnormalities.

MT 497 CLINICAL IMMUNOHEMATOLOGY var 3-6sh
Blood antigens, antibodies, crossmatching, hemolytic diseases, and related diagnostic tests. An in-depth study of blood donor service and its many facets such as transfusions, medico-legal aspects, etc.

MT 498 CLINICAL IMMUNOLOGY/SEROLOGY var 2-4sh
Immune response, immunoglobulins, autoimmunity and complement and related tests and diseases. Survey and demonstration of serological diagnostic tests.

MT 499 CLINICAL SEMINAR var 0-6sh
Other courses which are not included in the above (such as orientation, laboratory management, education, clinical microscopy) and/or are unique to the individual hospital program.

MU: MUSIC

Department of Music
College of Fine Arts

MU 101 INTRODUCTION TO MUSIC 3c-0l-3sh
Course presumes no technical background but does utilize the varied musical experiences of each individual to help extend interest as far as possible. Attendance at various concerts of university organizations, cultural life events, and visiting artist concerts is required to augment listening experiences of students.

MU 102 MUSIC FOR THE NONMAJOR 3c-0l-3sh
Prerequisite: MU 101 or permission of instructor
A sequel to MU 101. Course content will vary to cover a wide range of musical interests.

MU 103 PERSPECTIVES IN JAZZ 3c-0l-3sh
Designed to give an overview of the development and contributions of jazz in the American culture and provide a background for a more intensive and detailed study of jazz for the Jazz Studies major.

MU 110 FUNDAMENTALS OF THEORY 3c-0l-3sh
Rudiments of musical materials; harmonic, melodic, rhythmic, and basic formal procedures of the common practice period including pitch reading, interval construction, scales, and modes.

MU 111 THEORY SKILLS I 0c-3l-2sh
Develops aural skills through dictation and interpretation of written music by sight-singing. Taken in conjunction with Theory I.

MU 112 THEORY SKILLS II 0c-3l-2sh
Prerequisite: MU111
Continuing development of aural skills and introduction of keyboard skills. Taken in conjunction with Theory II.

MU 115 THEORY I 3c-0l-3sh
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants.

MU 116 THEORY II 3c-0l-3sh
Prerequisite: MU115
The study of the harmonic, melodic, and formal devices of the common practice period, from simple diatonic chords through secondary dominants. Theory II introduces basic music forms.

MU 120 BRASS ENSEMBLE var-1sh

MU 121 CHAMBER SINGERS var-1sh

MU 122 UNIVERSITY CHORALE var-1sh

MU 123 SYMPHONY BAND var-1sh

MU 125 MARCHING BAND var-1sh

MU 126 MUSIC THEATER var-1sh

MU 127 PERCUSSION ENSEMBLE var-1sh

MU 128 UNIVERSITY CHAMBER ORCHESTRA var-1sh

MU 129 UNIVERSITY SYMPHONY ORCHESTRA var-1sh

MU 130 STRING ENSEMBLE var-1sh

MU 131 UNIVERSITY WIND ENSEMBLE var-1sh

MU 133 WOODWIND ENSEMBLE var-1sh

MU 134 UNIVERSITY CHORUS var-1sh

MU 135 JAZZ ENSEMBLE var-1sh

MU 136 MELLOWMEN var-1sh

MU 151 CLASS VOICE I 1c-1l-1sh
Conceived for non-voice majors. Development of correct vocal production techniques through individual and group performance in class. Use of the voice as a tool for theory skills and for eventual use in the music classroom.

MU 152 CLASS VOICE II 1c-1l-1sh
Continuation of Class Voice I. Resumes development of correct vocal production techniques through performance.

MU 153 CLASS PIANO I 1c-1l-1sh
Designed for students with no significant background in piano who need to develop functional keyboard skills. Emphasis placed on harmonizing melodies and playing simple accompaniments.

MU 154 CLASS PIANO II 1c-1l-1sh
Continuation of Class Piano I.

MU 155 CLASS STRINGS I 1c-1l-1sh
For Music Education majors who will develop rudimentary playing techniques sufficient to initiate instruction for beginning students. Emphasis placed on correct playing positions and tone production for violin, viola, cello, and double bass.

MU 157 CLASS PERCUSSION I 1c-1l-1sh
A practical introduction to the various instruments of the percussion family. Students will demonstrate correct playing techniques and develop a resource file containing information on percussion instruments and instructional materials as needed by the school music teacher.

MU 159 CLASS BRASS I 1c-1l-1sh
For Music Education majors who will demonstrate rudimentary playing techniques and tone production skills to initiate beginning instruction. Students will develop playing on trumpet or French horn and trombone, euphonium, or tuba.

MU 161 CLASS WOODWINDS I 1c-1l-1sh
For Music Education majors who will acquire correct tone production and playing techniques sufficient to initiate beginning instruction. Students will demonstrate skills with flute, clarinet, saxophone, and oboe or bassoon.

MU 163 CLASS GUITAR I 1c-1l-1sh
Designed for students with no significant background in guitar who wish to develop functional playing skills. Emphasis placed on using the guitar as an accompanying instrument.

MU 201 JAZZ HISTORY I 3c-0l-3sh
An in-depth study of the principal movements, schools, performers and peripheral aspects of American jazz from its origins to the "Swing Era" of the early 1940s.

MU 202 JAZZ HISTORY II 3c-0l-3sh
A continuation of the study of the principal movements, schools, performers, and peripheral aspects of American jazz from the Jazz Revolution - BeBop to Free Jazz of the 1970s.

MU 211 THEORY SKILLS III 0c-3l-2sh
Prerequisites: MU111, 112
Further development of aural and keyboard skills. Taken in conjunction with Theory III.

MU 212 THEORY SKILLS IV 0c-3l-2sh
Prerequisites: MU111, 112, 211
Culmination of development in aural and keyboard skills. Taken in conjunction with Theory IV.

MU 213 JAZZ THEORY SKILLS I 0c-3l-2sh
Training in aural, vocal, and keyboard skills as they relate to the elements of jazz and improvisation. A high degree of emphasis is placed on ear training and its use in the transcription of live and recorded musical examples and on keyboard skills and their utilization in the development of an harmonic vocabulary.

MU 214 JAZZ THEORY SKILLS II 0c-3l-2sh
A continuation of work begun in Jazz Theory Skills I with emphasis on more advanced aural, vocal, and keyboard skills as they relate to jazz and improvisation.

MU 215 THEORY III 3c-0l-3sh
Prerequisites: MU115, 116
Extension of the techniques of the 18th and 19th centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures.

MU 216 THEORY IV 3c-0l-3sh
Prerequisites: MU 115, 116, 215
Extension of the techniques of the 18th and 19th centuries to include modulation, altered chords, more advanced musical forms, and contrapuntal procedures. Theory IV concentrates largely on music and materials of the present century.

MU 217 KEYBOARD HARMONY I 1c-1l-1sh
Prerequisite: Nominal facility at keyboard
Designed to develop keyboard skills so the student may realize and produce in sound basic harmonic progressions.

MU 218 KEYBOARD HARMONY II 1c-1l-1sh
Prerequisite: MU 217
Continuation of Keyboard Harmony I, involving chromatic harmony and more complex progressions.

MU 222 JAZZ THEORY I 3c-0l-3sh
The study of the elements of music, melody, harmony, rhythm, and form, as they are found in jazz improvisation. Includes an introduction to the fundamentals of jazz improvisation through aural and written analysis, composition, and performance.

MU 223 JAZZ THEORY II 3c-0l-3sh
A continuation of the work begun in Jazz Theory I with emphasis on extending the harmonic, melodic, and rhythmic vocabulary. Includes analysis of differing trends in jazz, imitation of a variety of styles, and the cultivation of an individualized approach to jazz analysis, composition, and improvisation.

MU 224 JAZZ IMPROVISATION TECHNIQUES I 3c-0l-3sh
A study of the basic materials and practices for improvising or extemporaneous playing.

MU 225 JAZZ IMPROVISATION TECHNIQUES II 3c-0l-3sh
A continuation of the basic materials and practices for improvising or extemporaneous playing. Makes use of more complicated and involved harmonic progressions utilizing extended choral harmonies.

MU 301 MUSIC HISTORY I 3c-0l-3sh
Intensive study of the history and style of Baroque and Classical music. Considerable analytic listening is required.

MU 302 MUSIC HISTORY II 3c-0l-3sh
Intensive study of the history and style of Romantic and 20th century music to 1950. Considerable analytic listening is required.

MU 303 MUSIC HISTORY III 3c-0l-3sh
Intensive study of the history and style of Medieval and Renaissance music. Considerable analytic listening is required.

MU 304 FORM AND ANALYSIS I 2c-0l-2sh
Prerequisite: MU 216
Thorough study of smaller forms of music.

MU 305 FORM AND ANALYSIS II 2c-0l-2sh
Prerequisite: MU 304
Thorough study of larger forms of music.

MU 306 COUNTERPOINT I 2c-0l-2sh
Prerequisite: MU 216
After study and analysis of the style of 16th-century contrapuntal writing, student will do original writing using techniques and devices of period. As time permits, same approach will be made to explore style of 17th- and 18th-century composers.

MU 307 COUNTERPOINT II 2c-0l-2sh
Prerequisite: MU 306
Continuation of study, analysis, and restricted writing of 17th- and 18th-century composers. Consideration given to free contrapuntal techniques used by later composers.

MU 308 FUGUE AND CANON 2c-0l-2sh
Prerequisite: MU 306
Application of contrapuntal techniques within these two specific forms through analysis, assigned exercises, and creative writing.

MU 309 ORCHESTRATION I 2c-0l-2sh
Prerequisite: MU 216
All instruments of orchestra are studied from the viewpoint of their contribution to the total sound of ensemble. Ranges and timbres are considered, as well as actual arranging of selected music.

MU 310 ORCHESTRATION II 2c-0l-2sh
Prerequisite: MU 309
A continuation of Orchestration I.

MU 311 FUNDAMENTALS OF CONDUCTING 3c-0l-2sh
Emphasis placed on fundamental physical skills of conducting process; various beat patterns are mastered and elementary score reading and interpretation considered.

MU 312 CHORAL CONDUCTING 3c-0l-2sh
Prerequisite: MU 311
Provides an opportunity for the student to apply basic conducting techniques to choral music. Each student conducts the class in standard choral works. Includes survey of suitable literature, organizational problems, voice testing, rehearsal techniques, program building, interpretation, and diction.

MU 313 INSTRUMENTAL CONDUCTING 3c-0l-2sh
Prerequisite: MU 311
Provides the student with an opportunity to apply basic conducting skills to various instrumental ensembles. Includes survey of suitable literature, organizational problems, audition procedures, rehearsal techniques, program building, and interpretation.

MU 315 THEORY V 3c-0l-3sh
Prerequisite: MU 216
Many of harmonic idioms of past half century are considered, such as comparative analysis of dissonance; polytonality, polyrhythms; atonalism and 12-tone system; and microtonalism. Original writing in these styles required.

MU 318 JAZZ ORCHESTRATION AND COMPOSITION I 3c-0l-3sh
Work in composition and arranging for instrumental ensembles from trio up to a standard jazz ensemble including reeds, brass, and rhythm section. Study proceeds from harmonization of a given melody to a study of voicing and the realization through composition for various instrumental combinations. Included is a thorough study of instruments and particularly their use in jazz as expressive vehicles for improvisation.

MU 319 JAZZ ORCHESTRATION AND COMPOSITION II 3c-0l-3sh
Prerequisite: MU 318
Continuation of work in MU 318. Study expands to include strings, full orchestra, band, and choirs and their utilization in jazz. More emphasis on original work in composition and arranging.

MU 320 MUSIC OF THE ANCIENT WORLD 3c-0l-3sh
Concentrated study of music from Ancient Greek up to Middle Ages.

MU 321 MUSIC OF THE MIDDLE AGES 3c-0l-3sh
Starting with the Jongleurs, Troubadors, and Trouveres of Early Middle Ages, course deals with literature of music through English and Burgundian Schools at close of the Middle Ages.

MU 322 RENAISSANCE MUSIC 3c-0l-3sh
Beginning with Ockeghem and ending with Palestrina and his contemporaries, music literature of this age is carefully and thoroughly studied.

MU 323 THE BAROQUE ERA 3c-0l-3sh
Prerequisites: MU 301, 302
Extends from Monteverdi through Bach and Handel and considers vocal and instrumental forms, styles, and practices of era.

MU 324 EIGHTEENTH-CENTURY MUSIC 3c-0l-3sh
Prerequisites: MU 301, 302
Although Mozart and Haydn constitute a greater portion of 18th-century music, Rococo period involves D. Scarlatti and C.P.E. Bach as well.

MU 325 THE EARLY ROMANTIC PERIOD 3c-0l-3sh
Prerequisites: MU 301, 302
Beethoven, Schubert, Rossini, Weber, Mendelssohn, Berlioz, Schumann, and Chopin are major composers to be studied in Early Romantic Period.

MU 326 THE LATE ROMANTIC PERIOD 3c-0l-3sh
Prerequisites: MU 301, 302
Wagner, Verdi, Glinka, Bruckner, Meyerbeer, Liszt, Gounod, Brahms, Offenbach, Smetana, J. Strauss, Grieg, Bizet, Moussorgsky, Saint-Saens, Tschaikowsky, Massenet, Franck, Borodin, Rimski-Korsakoff, Wolf, R. Strauss, Mahler, Faure, Puccini, Dvorak, MacDowell, and Elgar are major composers of this study.

MU 331 ELEMENTARY METHODS 3c-0l-3sh
Includes analytical study of texts, recordings, equipment, instruments, and other materials suitable to musical development of elementary pupils; proper treatment of child voice; selection, use and teaching of rote songs; rhythmic activities and development; music reading; part singing; planning and organization; guided observations; and evaluation techniques.

MU 332 GUITAR AND RECREATIONAL INSTRUMENTS FOR TODAY'S CLASSROOM 0c-3l-2sh
Designed for classroom teachers and music specialists to utilize several social instruments in the school setting. Major emphasis on learning to play the guitar to accompany singing. Other fretted instruments, recorder, autoharp, and Orff instruments are included.

MU 333 SECONDARY METHODS 3c-0l-3sh
Includes General Music Class, choral organizations, changing voice, techniques of instruction, including team teaching and programmed learning, high school theory courses, high school music literature courses, scheduling, administrative problems, curriculum development, evaluation of materials and equipment, evaluative techniques, and guided observation. Extra laboratory sessions are required.

MU 335 MUSIC FOR THE EXCEPTIONAL STUDENT 2c-2l-2sh
Develops music education skills, techniques, and materials for the emotionally, mentally, physically, or neurologically handicapped student and the gifted. Designed for students in music education, special education, and elementary education.

MU 351 ITALIAN DICTION AND LITERATURE 2c-0l-2sh
For first semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and readings of Italian song texts. Italian madrigals, solo song literature, and operatic repertoire are also studied.

MU 353 FRENCH DICTION AND LITERATURE 2c-0l-2sh
For third or fourth semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage and the International Phonetic Alphabet. French solo song literature and operatic repertoire are also studied.

MU 354 GERMAN DICTION AND LITERATURE 2c-0l-2sh
For second semester voice majors, this class meets for two hours per week. Emphasis is on pronunciation for the stage. German solo song literature as well as Bach chorales are studied.

MU 401 CHORAL SCORE READING AND REPERTOIRE 2c-0l-2sh
Prerequisites: MU216, 312.
Analysis of texts and music in selected choral works from each of the major periods of composition.

MU 402 INSTRUMENTAL SCORE READING 2c-0l-2sh
Prerequisites: MU 216, 313
Analysis of music in selected instrumental works from each of the major periods of composition.

MU 405 PIANO PEDAGOGY 3c-0l-3sh
Prerequisites: Junior Standing in Piano and a piano major or minor
Survey of current and significant past developments in teaching of piano, both privately and in small and large classes. The various piano methods are analyzed, compared, criticized, and adapted to each individual's use.

MU 406 VOICE PEDAGOGY 3c-0l-3sh
Prerequisites: A voice major or minor and permission of the instructor
Survey of current and past development in teaching of voice, both privately and in small and large classes. The various vocal methods are analyzed, compared, criticized, and adapted to each individual's use.

MU 407 MASTER CLASS IN ORGAN 2c-0l-2sh
Prerequisites: For organ majors only, with instructor's permission.
From time to time the organ instructor will accept from 4 to 8 organ majors for this course. Every student observes every other student's instruction, and various techniques of teaching organ are demonstrated.

MU 408 MARCHING BAND TECHNIQUES 2c-0l-2sh
Considers building a band show; alignment of ranks and files; development of a standard pace of 5 to 5 and 8 to 5; selection of music; instrumentation; techniques of developing morale; and fundamentals of uniform design.

MU 411 COMPOSITION I 2c-0l-2sh
Prerequisite: MU 216
Instruction is individualized. Compositional devices studied through analysis of works by major composers. Students will write several original compositions utilizing smaller forms.

MU 412 COMPOSITION II 2c-0l-2sh
Prerequisite: MU 411
Continuation of Composition I.

MU 413 COMPOSITION III 2c-0l-2sh
Prerequisite: MU 412
Students will write several original compositions utilizing larger forms.

MU 414 COMPOSITION IV 2c-0l-2sh
Prerequisite: MU 413
Continuation of Composition III. Outstanding works will be programmed by university performing ensembles.

MU 420 CONTEMPORARY MUSIC 3c-0l-3sh
Prerequisites: MU 301, 302
Beginning with Debussy, Ravel, and other impressionists, touching on Schoenberg, Stravinsky, Webern, Honegger, Milhaud, et al. Contemporary Music ends with today and tomorrow. Various trends, styles, and techniques are noted: judgments are attempted on more experimental forms; limited predictions of trends are ventured.

MU 421 AMERICAN MUSIC 3c-0l-3sh
Prerequisites: MU 301, 302
A study of history and literature of music in America from 1600 to the present day.

MU 475 MUSIC LAB var-0sh
All music majors must attend 8 recitals per semester and all departmental recitals, as well as all recitals for their respective performance areas.

MU 481 SPECIAL TOPICS IN MUSIC 3c-0l-3sh
May provide an in-depth study of a narrowly defined area of the discipline. Subject matter will change with repeated offering of the course. May be repeated for credit.

MU 482 INDEPENDENT STUDY var-1 to 6sh
Opportunity to pursue special interests beyond the scope of regular class offerings. Permission of instructor and approval of department chairperson are required.

MU 493 INTERNSHIP IN MUSIC var-1 to 6sh
Designed for music majors who wish to receive practical experience working with people in music or in areas related to music.

NU: NURSING

Department of Nursing
College of Human Ecology and Health Sciences

NU 280 NURSING CORE I 3c-0l-3sh
Introduction to the philosophy of baccalaureate education for nursing, the nursing process, and the role of the nurse, concepts and principles basic to health and disease, and implications for care of patients with problems common to maintenance of health.

NU 285 NURSING I 3c-1l-3sh
Nursing theory and skills necessary for nursing diagnosis, nursing process; includes laboratory.

NU 302 NURSING II 2c-1s-3sh
Knowledge of biophysical and psychosocial sciences is stressed. Emphasis is on nursing theory relevant to clients with non-acute or acute alterations in homeostasis. Client-centered nursing problems are presented by students in a weekly seminar, with faculty guidance.

NU 303 NURSING IIA (LAB) 0c-15l-5sh
Application of nursing theory using the nursing process, under faculty supervision in health agencies, to clients with non-acute or acute alterations in homeostasis. Clinical practice settings include hospitals and community clinics.

NU 304 NURSING III 2c-1s-3sh
Nursing theory pertinent to nursing care of clients with acute and more complex deviations from health. Seminar emphasizes client-centered nursing problems and analysis of identified problems.

NU 305 NURSING IIIA (LAB) 0c-15l-5sh
Application of nursing theory using the nursing process under faculty supervision with clients having acute and more complex alterations in homeostasis. Clinical Practice areas include all utilized in NU 303. Student plans, implements, and evaluates care for clients of all ages and includes health teaching as part of nursing practice.

NU 322 NURSING CORE II 3c-0l-3sh
Principles and concepts pertinent to normal growth and development, family and group dynamics, alterations in homeostasis, pathophysiology, psychopathology, research, professional development, and teaching-learning principles related to man, health, and nursing.

NU 323 NURSING CORE III 3c-0l-3sh
Continuation of concepts and principles, increasing in depth and severity of alterations in homeostasis. Emphasis is on pathophysiology, psychopathology, disease control, rehabilitation, management principles, and health teaching.

NU 402 NURSING IV 2c-1s-3sh
Nursing theory pertinent to care of clients with crises and life-threatening alterations in homeostasis is emphasized. Methods of leadership and management and change theory are presented. Client-centered nursing seminars are presented weekly.

NU 403 NURSING IV-A (LAB) 0c-15l-5sh
Application of nursing theory in various health care agencies, using the nursing process with life-threatening alteration in homeostasis, critical health failures, and psychoses. Practice occurs in acute and chronic psychiatric settings, intensive/ coronary care units, and medical-surgical units of the general hospital. Student cares for patients on a one-to-one basis in intensive care units and develops management skills on medical-surgical units, caring for groups of clients.

NU 404 NURSING V 2c-1s-3sh
Nursing theory relevant to utilizing the nursing process in leadership roles, self-direction, and professional accountability terminating in independent functioning within a health care agency and the community. Seminars emphasize client-centered problems, leadership role conflicts or success, trends in nursing, roles and responsibility for self and professional growth.

NU 405 NURSING V-A (LAB) 0c-15l-5sh
Application of nursing process utilizing concepts and principles accumulated throughout the education process. Student has the opportunity to elect areas of practice within any health care setting, also practices in clinics, clients' homes, community nursing agencies, and health education programs.

NU 422 NURSING CORE IV 3c-0l-3sh
Concepts and principles of pathophysiology and psychopathology, to life-threatening alterations in homeostasis, disturbed communications, and crisis theory. Change theory, nursing contribution to change within the health care delivery system, leadership development, and the liaison role of the nurse are stressed. Professional responsibility, accountability, and professional standards are taught.

NU 423 NURSING CORE V 3c-0l-3sh
Concepts and principles of leadership responsibility, professional relationships, delivery of health care in community, state, and national systems. Management principles essential to peer review, nursing audit, client advocacy, professional career opportunities, and methods to secure employment, labor relations, and changes in the health care system are taught.

NU 430 NURSING RESEARCH 3c-0l-3sh
Research methodology, development of clinical research investigation. Writing a research paper and becoming a more knowledgeable consumer of research.

NU 480 WORKSHOP - ONCOLOGICAL NURSING var-1sh
A one-week workshop presenting an in-depth analysis of cancer nursing. Content includes tumor formations, current treatment modalities, and problems common to cancer patients and their families. Offered during summer sessions.

NU 482 INDEPENDENT STUDY var-1 to 3sh
Prerequisites: Senior standing, prior approval of faculty member guiding study. Elective option for students to pursue greater depth of knowledge in a chosen area of nursing.

PC: PSYCHOLOGY

Department of Psychology
College of Natural Sciences and Mathematics

PC 101 GENERAL PSYCHOLOGY 3c-0l-3sh
An introduction to the scientific study of behavior and mental processes.

PC 290 EXPERIMENTAL DESIGN AND ANALYSIS I 3c-2l-4sh
Prerequisites: PC 101, MA 217
A laboratory course devoted to designing, conducting, and evaluating results of psychological experiments.

PC 291 EXPERIMENTAL DESIGN AND ANALYSIS II 3c-2l-4sh
Prerequisites: PC 101, 290
A continuation of Experimental Design and Analysis I.

PC 310 DEVELOPMENTAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
Comprehensive study of all factors that contribute to human development from conception to death, particularly as they relate to psychological development of individual. A survey course directed at students not planning to take PC311, 312, 373. Credit toward a major or minor in psychology will not be given for both PC 310 and PC 311.

PC 311 CHILD PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
Study of factors that influence total development and behavior of child. Current theories and research are considered, with focus upon optimum development of individual. Credit toward a major or minor in psychology will not be given for both PC 310 and 311.

PC 312 ADULT DEVELOPMENT AND AGING 3c-0l-3sh
Prerequisite: PC 101
A survey of physiological, cognitive, emotional, and social issues affecting the young adult, the middle-aged, and the elderly. Includes an examination of significant adult life crises.

PC 320 PERSONALITY 3c-0l-3sh
Prerequisite: PC 101
Provides comparative analysis of major representative traditional and contemporary theories of personality.

PC 321 ABNORMAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
The description, causes, and treatment of behaviors labeled abnormal in our society are studied from experimental and clinical points of view.

PC 322 INTRODUCTION TO PSYCHOLOGICAL MEASUREMENT 3c-0l-3sh
Prerequisites: PC 101, MA 217
Survey of psychological measurement techniques, with emphasis on theoretical assumptions underlying these techniques and discussion of interpretation and limitations of measuring instruments.

PC 330 SOCIAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
The study of the effects of the social environment on human behavior. Topics include perception of person, attitude formation and change, and small group interaction.

PC 331 ENVIRONMENTAL PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
The study of the relationship between human behavior and its environmental context. Emphasis on the physical environment, both natural and built.

PC 340 HUMAN COGNITION: PERCEPTION 3c-2l-4sh
Prerequisites: PC 101, 290
Study of perceptual process. Sensory mechanisms for processing information are examined, as well as responses to complex stimuli.

PC 341 CONDITIONING AND LEARNING 3c-2l-4sh
Prerequisites: PC 101, 290
Examination of the basic principles of learning and related phenomena; discussion of classical conditioning, discrimination learning, and aversive control of behavior.

PC 342 HUMAN COGNITION: MEMORY AND THINKING 3c-2l-4sh
Prerequisites: PC 101, 290
Study of methods and findings in areas of human memory and human information processing.

PC 350 PHYSIOLOGICAL PSYCHOLOGY 3c-2l-4sh
Prerequisites: PC 101, 290
Study of the relationship between behavior and anatomy and physiology of the nervous system.

PC 351 PSYCHOPHARMACOLOGY 3c-2l-4sh
Prerequisite: PC 290 or permission
Survey of the theoretical and empirical foundations of psychopharmacology. Topics include discussions of the basic principles of pharmacology, theories of drug action, structure and function of the nervous system with special emphasis on current findings on neurotransmitters and the site of action of psychoactive drugs.

PC 352 ETHOLOGY AND COMPARATIVE PSYCHOLOGY 3c-2l-4sh
Prerequisites: PC 101, 290
Comparative survey of animal behavior and its control mechanisms including sensory and physiological systems, reproduction and parenting, social behavior, and the role of learning in various animal species. Emphasis is on the relationship of the animal to its environment.

PC 370 CONSCIOUSNESS 3c-0l-3sh
Prerequisites: PC 101, junior standing
This course will examine psychological research on awareness, attention, brain neurotransmitters, brain laterality, sleep, dreams, and hypnosis.

PC 371 HUMAN MOTIVATION 3c-0l-3sh
Prerequisite: PC 101
Systematic study of how behavior is initiated, sustained, directed, and terminated. Current theories in this area are critically reviewed.

PC 372 DRUGS AND BEHAVIOR 3c-0l-3sh
Prerequisites: PC 101 and junior standing or permission
Survey of the current knowledge concerning the actions of drugs. Topics will include legal and social issues surrounding drug use, hazard potential of commonly used drugs, review of current theories and issues regarding the use of drugs in psychotherapy, and consideration of treatment approaches for addiction.

PC 373 ADOLESCENT PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101
Study of the adolescent and his world, especially the physical aspects of adolescence, psychological growth patterns, social pressures, and adaptation.

PC 374 STRESS AND COPING 3c-0l-3sh
Prerequisite: PC 101
Fundamental concepts and findings in stress and stress-related disorders. Relationships of stress to disease and methods for coping with stress are presented.

PC 375 SOCIAL COGNITION 3c-0l-3sh
Prerequisites: PC 101, 330
The application of social psychological research and theory to selected public issues such as racism, aggression, altruism, social injustice, and international conflict.

PC 377 POLITICAL BEHAVIOR 3c-0l-3sh
Prerequisites: PC 101, PS 111
An interdisciplinary course which investigates the psychological bases of political behavior.

PC 378 PSYCHOLOGY OF DEATH AND DYING 3c-nL-3sh
Prerequisite: PC 101
Theories and research which delineate the psychological factors affecting the dying person as well as those persons close to one who is dying are discussed.

PC 410 HISTORICAL TRENDS IN PSYCHOLOGY 3c-0l-3sh
Prerequisite: PC 101, junior or senior standing or permission
Comprehensive overview of historical antecedents of contemporary psychology with emphasis on their implications for future developments in the field.

PC 411 PSYCHOLOGY OF WOMEN 3c-0l-3sh
Prerequisite: PC 101, junior or senior standing or permission of the instructor
A critical examination of the assumptions about women which are held by the discipline of psychology, considering both current research and individual experience. The psychological effects of socialization on sex role identity, achievement, interpersonal power, mental health, and critical incidents in female development are discussed in the context of relevant concepts from developmental and social psychology.

PC 420 PSYCHOLOGY OF ORGANIZATIONS 3c-0l-3sh
Prerequisites: PC 101, MA 217
The study of psychological principles in an organizational setting; application of psychological principles to individual behavior and experience in organizations.

PC 421 PSYCHOLOGY OF WORK 3c-0l-3sh
Prerequisite: PC 291
The analysis, measurement, prediction, and development of human aptitude, ability, and performance in work and employment situations.

PC 424 PLANNED ORGANIZATIONAL CHANGE 3c-0l-3sh
Prerequisite: PC 420
Provides instruction and experience in the theories and techniques involved in changing organizational activities and practices. Discussions of theories will be combined with a variety of group exercises.

PC 445 BEHAVIOR MODIFICATION 3c-0l-3sh
Prerequisites: 12 sh of psychology
Survey of the theoretical and empirical foundations of behavior modification procedures.

PC 450 INTRODUCTION TO CLINICAL PSYCHOLOGY 3c-0l-3sh
Prerequisites: PC 101, 320, 321, and permission of instructor
Overview of clinical psychology, with emphasis upon clinician's use of methods of evaluation, and treatment and modification of behavior.

PC 480 HONORS SEMINAR IN PSYCHOLOGY 3c-0l-3sh
A seminar in the graduate tradition with a specialized topic. May be taken more than once to a maximum of 6sh.

PC 481 SPECIAL TOPICS IN PSYCHOLOGY var-1 to 3sh
Prerequisites: PC 101 and department consent
A seminar providing study of selected topics not emphasized in other courses. May be taken more than once to a maximum of 6sh.

PC 482 INDEPENDENT STUDY IN PSYCHOLOGY var-1 to 3sh
Prerequisites: PC 101 and department consent
Individual students pursue their particular interests in psychology in consultation with a member of the staff. May be taken more than once to a maximum of 6 credits.

PC 493 PSYCHOLOGICAL PRACTICUM var-1 to 12sh
Prerequisites: PC 101 and department consent
Under supervision of psychology department, selected students receive experience in application of psychological techniques. May be taken more than once to a maximum of 12 semester hours.

PH: PHILOSOPHY

Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

PH 101 GENERAL LOGIC: METHODS OF CRITICAL THINKING 3c-0l-3sh
Designed to develop students' ability to critically analyze deductive and inductive argumentation, rhetoric, and persuasion, with examples drawn from media, textbooks, advertising, scholarly works, personal contacts, etc. Emphasis upon the nature of definition, clarification of meaning, detection of fallacies, scientific methodology, and logic as a practical tool.

PH 120 INTRODUCTION TO PHILOSOPHY 3c-0l-3sh
Designed to acquaint the beginning student with philosophical problems and methods in such areas as metaphysics, epistemology, logic, value theory, and philosophy of religion.

PH 221 SYMBOLIC LOGIC I 3c-0l-3sh
An introduction to symbolic logic dealing with the symbolization of deductive arguments in the sentential calculus, syllogistic calculus, and quantificational calculus, including the logic of relations. Natural deduction proofs, truth trees, and other tests of validity are covered.

PH 222 ETHICS 3c-0l-3sh
Investigation of efforts to rationally justify moral judgment: What is "moral?" Are moral notions cultural, rational, divine, or innate in origin? Are they "relative" or "absolute?" Are they intuitive, cognitively meaningless, or supportable by "good reasons?"

PH 223 PHILOSOPHY OF ART 3c-0l-3sh
Meaning of aesthetics as a philosophical discipline; methodological questions; a classification of problem areas; questions of imitation, history, and art, the artist, the audience; consideration of some of the major Western and non-Western writers' positions. Nature of artistic creativity; art and anarchy; chance and art; definition of art in the present culture.

PH 311 EASTERN PHILOSOPHY 3c-0l-3sh
An examination and critique of the philosophies which have shaped Eastern world views and ways of life as found in a representative sampling of Chinese, Japanese, and Indian thought.

PH 321 SYMBOLIC LOGIC II 3c-0l-3sh
Prerequisite: PH 221 or permission of instructor
A continuation of Logic I designed to enable students to evaluate consistency of statements, validity of arguments, soundness and completeness of formal systems. Focus on quantificational calculus and inductive logic.

PH 323 POLITICAL PHILOSOPHY 3c-0l-3sh
Political thought of such major classical theorists as Plato, Aristotle, Cicero, Augustine, Aquinas, Hobbes, Rousseau, Locke, Marx, and Mill, examined against the background of metaphysical roots from which their political views derive.

PH 324 HISTORY OF PHILOSOPHY I: ANCIENT AND MEDIEVAL 3c-0l-3sh
Western philosophy of pre-Socratic, classical Greek, Roman, and medieval periods. Special attention given to Plato, Aristotle, Augustine, and Aquinas, as well as the philosophic schools.

PH 325 HISTORY OF PHILOSOPHY II: RENAISSANCE AND MODERN 3c-0l-3sh
Continuation of PH 324, beginning with 15th-century Renaissance thought and ending with the 19th-century precursors of contemporary philosophies.

PH 326 PHENOMENOLOGY AND EXISTENTIALISM 3c-0l-3sh
A study of the Phenomenological method as developed by Edmund Husserl and of the subsequent Phenomenological movement as exemplified in the works of such representative figures as Heidegger, Merleau-Ponty, and Paul Ricoeour and of Existentialism both as an independent movement of thought and as influenced by Phenomenology and as exemplified in the works of such representative figures as Kierkegaard, Jaspers, Marcel, Buber, and Sartre.

PH 327 AMERICAN PHILOSOPHIC THOUGHT 3c-0l-3sh
Study of the more original and influential philosophical positions developed in America from colonial period to present and of the thinkers who gave them their most complete expressions.

PH 329 PHILOSOPHY OF RELIGION 3c-0l-3sh
Philosophical problems in religious thought: nature of religious experience, mysticism, defining "religion," conceptions of deity, existence of God, meaning of religious language, faith, and knowledge.

PH 330 PHILOSOPHY OF SCIENCE 3c-0l-3sh
An investigation into the nature of formal and empirical sciences: structure of scientific thought and its dependence upon or independence of theory; the logical and metaphysical status of scientific "laws" and theoretical concepts; reductionism in science; the concept of causality; the logic of explanation; problems in confirmation theory; science and value. No special background required. Recommended for math and science majors.

PH 400 ETHICS AND PUBLIC POLICY 3c-0l-3sh
An analysis of the ethical dimension of public policies. Provides a general understanding of ethical theories, then focuses on their application to specific policy issues. Topics will vary from semester to semester. See current schedule of classes.

PH 405 HUMAN RIGHTS: THEIR BASIS AND BOUNDARIES 3c-0l-3sh
An analysis of a concept which is the focus of much moral, political, and legal dispute. Philosophical sources are supplemented by recent social science research concerning the comparative abilities of human and nonhuman animals and by environmental studies which prompt consideration of the possible rights of future generations.

PH 410 CONTEMPORARY PHILOSOPHY 3c-0l-3sh
Survey in depth of 20th-century Western positions such as pragmatism, logical positivism, logical and linguistic analysis, existentialism, and phenomenology.

PH 420 METAPHYSICS 3c-0l-3sh
Divergent views of the nature of reality and the main questions which it raises: substance, unity, mind, existence, necessity, possibility, time, eternity, space, and the self.

PH 421 THEORY OF KNOWLEDGE 3c-0l-3sh
Investigation into problems involved in justifying knowledge claims and a consideration of methods suggested for their resolution. Particular attention paid to problems of certainty, objectivity, perception, and truth.

PH 450 PHILOSOPHY OF LAW 3c-0l-3sh
An examination of the philosophical issues that arise in the course of attempting to understand the law and how legal institutions do and should operate.

PH 460 PHILOSOPHY OF LANGUAGE 3c-0l-3sh
An investigation of issues in the philosophy of language and related issues in linguistics (including anthropological linguistics, sociolinguistics, and psycholinguistics). Topics include, for example, the influence of language on perception, rationalist/empiricist perspectives on language acquisition, language and political control, reference, meaning, and truth.

PH 481 SPECIAL TOPICS 3c-0l-3sh
Topical courses which will vary from semester to semester. See current schedule of classes.

PH 482 INDEPENDENT STUDY var-1 to 6sh
Individual students wishing to pursue philosophical interests not covered in the department's regular offering may do so by seeking approval for independent study. Make inquiry of the chairperson. Upon approval, students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to a maximum of 6sh. (This option is available to both philosophy majors and nonmajors.)

PH 482 INDEPENDENT STUDY: HONORS PROJECT 3c-0l-3sh
Prerequisites: 3.00 QPA, 15sh in Philosophy and 3.20 average in departmental courses
Majors in Philosophy are invited to take 3 sh of independent study designated "Honors Project." Upon satisfactory completion, graduation with departmental honors is possible.

PS: POLITICAL SCIENCE

Department of Political Science
College of Humanities and Social Sciences

PS 101 WORLD POLITICS 3c-0l-3sh
Analysis of contemporary (Post-1945) state system and forces shaping the world in which we live. Student is given a framework within which to analyze contemporary international politics.

PS 111 AMERICAN POLITICS 3c-0l-3sh
Introduction to American national government and politics, emphasizing Constitution, party system, Congress, Presidency, courts, and problems in national-state relations, civil rights, foreign policy, and social and economic policies.

PS 250 PUBLIC POLICY 3c-0l-3sh
Emphasizes dynamics of government as they are evidenced in public opinion, pressure groups, political parties, and our governmental institutions, attention also directed toward the political-economical nexus within American society.

PS 251 STATE AND LOCAL POLITICAL SYSTEMS 3c-0l-3sh
Institutions and processes of state and local governments, with special attention to Pennsylvania; emphasis on the nature of federalism, state constitutions, and role of state and local government in an urban society.

PS 280 COMPARATIVE GOVERNMENT I - WESTERN POLITICAL SYSTEMS 3c-0l-3sh
Analyzes Western political systems with emphasis upon major contemporary democratic governments of Europe. Analyzes and compares their political cultures, political institutions, and political processes.

PS 281 INTERNATIONAL RELATIONS 3c-0l-3sh
Provides a conceptual framework for understanding sovereignty, nationalism, power, security, dispute settlement, and diplomatic, legal, economic, and military relations of nation-states.

PS 283 AMERICAN FOREIGN POLICY 3c-0l-3sh
Examines formulation and execution of American foreign policy, with attention to governmental institutions, mass media, interest groups, and public opinion; emphasizes contemporary problems.

PS 285 COMPARATIVE GOVERNMENT II: NON-WESTERN POLITICAL SYSTEMS 3c-0l-3sh
Analyzes major non-Western political systems with emphasis upon authoritarian and totalitarian systems. Analyzes and compares in a systematic manner their political cultures, political institutions, and political processes.

PS 298 NEWS INTERPRETATION 1c-0l-1sh
Designed to provide students with techniques for intelligent reading of the daily newspaper and weekly news magazines and to give some understanding of current affairs at state, national, and international levels.

PS 299 RESEARCH METHODS IN POLITICAL SCIENCE 3c-0l-3sh
Prerequisite: PS 111
Explores approaches, methods, and tools of political science, designed to prepare student who plans to do graduate work in political science. Majors and minors only.

PS 320 INTERNATIONAL LAW 3c-0l-3sh
Prerequisites: PS 101, PS 281 or permission of instructor
Study of the development, nature, and function of international law, including recent trends.

PS 321 INTERNATIONAL ORGANIZATIONS 3c-0l-3sh
Prerequisites: PS 101, PS 281 or permission of instructor
Inquiry into purposes, structures, and actions of contemporary international political organizations, such as United Nations, regional and functional organizations.

PS 346 POLITICAL SOCIOLOGY 3c-0l-3sh
Prerequisites: PS 111, SO 151
Examines (a) who controls the state and state policy, (b) the role the state plays in stabilizing capitalism and protecting the power of the upper class, (c) the political activities of the middle and upper class, (d) labor, civil rights, and welfare rights, and social movements in America. Cross-listed in Sociology as SO 458: Political Sociology.

PS 350 THE PRESIDENCY 3c-0l-3sh
Examination of the Office of President, with attention to constitutional foundations, evolution, structure, powers, and functions; some comparisons between presidential and parliamentary systems and between offices of President and Governor.

PS 351 LEGISLATIVE PROCESS 3c-0l-3sh
Functional study of legislative bodies and process of legislation, covering organization of legislative assemblies, operation of committee system, procedures, bill drafting, aids, and controls over legislation.

PS 353 AMERICAN POLITICAL PARTIES 3c-0l-3sh
The role of people, parties, and pressure groups in politics of American democracy; attention to sectional and historical roots of national politics, voting behavior, pressure group analysis, and campaign activities.

PS 354 METROPOLITAN PROBLEMS 3c-0l-3sh
Analyzes multiplicity of problems facing our metropolitan areas. Contemporary developments such as urban renewal, shrinking tax base, federal aid to cities, subsidized mass transit, municipal authorities, and political consolidation are examined.

PS 355 INTERGOVERNMENTAL RELATIONS 3c-0l-3sh
Explores characteristics of federal systems of government, with emphasis on theories, origins, institutions, problems in intergovernmental relations in the United States, federal systems in other nations, and trends.

PS 356 MASS MEDIA IN AMERICAN POLITICS 3c-0l-3sh
Variant theories of the symbolic relationship between American politics and the press are examined in the light of the American colonial-national experience. The special constitutional rights given to the media are explored, with particular attention to radio-TV.

PS 357 LABOR IN BUSINESS AND POLITICS 3c-0l-3sh
An in-depth study and analysis of labor and business involvement in politics is the focus of the course. Special attention will be given to the involvement of labor and business in Pennsylvania politics as well as to the relationship between the two competing groups—conflict or cooperation.

PS 358 JUDICIAL PROCESS 3c-0l-3sh
Prerequisite: PS 111
Explores nature and limits of judicial power, courts as policy-making bodies, selection of judges, decision process, external forces impinging on the courts, and role of Supreme Court in its relationship with Congress, the Presidency, and federalism.

PS 359 CONSTITUTIONAL LAW AND CIVIL LIBERTIES 3c-0l-3sh
Prerequisite: PS 111
Study of civil liberties and civil rights issues through leading Supreme Court decisions; topics treated include First Amendment rights, procedural due process and the Bill of Rights, and Equal Protection problems in civil rights.

PS 360 CLASSICAL POLITICAL THOUGHT 3c-0l-3sh
Restriction: Not for credit after PH 323
Evolution of the Western political tradition of Constitutionalism from Plato and Aristotle to Locke and Montesquieu; religious and rational foundations; medieval theories of authority and representation; early modern theories of the state and sovereignty; concepts of law; natural rights, liberty and equality, and justice treated in detail.

PS 361 MODERN POLITICAL THOUGHT 3c-0l-3sh
Development of Western political thought since the mid-16th century: classic liberalism; conservative thought; modern irrational ideologies such as fascism and national socialism; socialist thought; contemporary collectivist liberalism.

PS 362 AMERICAN POLITICAL THOUGHT 3c-0l-3sh
Develops an understanding of American political thinkers from the Puritans through the current Afro-American writers. Political phenomena are examined relating to past writings, and inferences are made for future political behavior.

PS 370 INTRODUCTION TO PUBLIC ADMINISTRATION 3c-0l-3sh
Theories of organization and structural organization, personnel processes, executive functions, financial administration, the politics of administration, public relations, and problems of democratic control of bureaucracy.

PS 371 ISSUES IN PUBLIC ADMINISTRATION 3c-0l-3sh
Intensive study of the role of federal agencies and their administrators in determining and developing public policy. Public administration in practice is emphasized by utilizing case studies.

PS 377 POLITICAL BEHAVIOR 3c-0l-3sh
Prerequisites: PC 101, PS 111
An interdisciplinary course which investigates the psychological bases of political behavior. Cross-listed in Psychology as PC 377: Political Behavior.

PS 380 SOVIET POLITICS 3c-0l-3sh
Essential features of Communist party and government of U.S.S.R., including geographical and historical background and ideological and theoretical foundations. PS 280, Comparative Government, should be taken prior to this course.

PS 382-387 POLITICAL SYSTEMS 3c-0l-3sh
Intensive, comparative study of the government and politics of a selected region. Suggested prerequisites: PS 280 and/or 285.
PS 382 Africa
PS 383 - Asia
PS 384 - Middle East
PS 385 - Central and Eastern Europe
PS 386 - Atlantic Community
PS 387 - Latin America

PS 388 POLITICAL-MILITARY STRATEGY 3c-0l-3sh
Prerequisites: PS 281 or PS 283 or MS 101-102
Deals with national security problems including decision making and budgeting, levels of strategy, the utility of force, and the impact of the military on American society.

PS 389 DEVELOPING NATIONS 3c-0l-3sh
Suggested prerequisites: PS 280 and/or 285
Political characteristics of emerging nations; impact of economic and social change upon political structure; evolving patterns of political development; and techniques of nation-building.

PS 444 SCIENCE/TECHNOLOGY AND POLITICS 3c-0l-3sh
Focuses on the interactions of science/technology and politics as they impinge on the public decision-making process. Technology generated sociopolitical problems are investigated on local, state, national, and international level; the adequacy of political processes and institutions for solving problems in the technological age is questioned.

PS 480 POLITICAL SCIENCE SEMINAR 3c-0l-3sh
Readings and written assignments of a specific topic determined by the instructor in charge.

PS 481 SPECIAL TOPICS var1-3sh
Course focusing on a specific topic determined by the instructor in charge. See Department Office for current listings.

PS 482 INDEPENDENT STUDIES var-3sh
Readings and written assignments on a specific topic determined by the instructor and student. Permission required.

PS 485 HONORS IN POLITICAL SCIENCE var-3sh
Prerequisites: 15 sh in Social Sciences, including 9 sh in Political Science, 2.0 QPA in Social Sciences, and permission of department chairperson and instructor
Directed readings and one or more papers; topic to be selected by instructor and student.

PS 493 POLITICAL SCIENCE INTERNSHIP var-2 to 12sh
Prerequisites: 9 sh in Political Science with 2.0
QPA, PS 111, approval of internship director and chairperson Practical experience in government and politics. "Log" and research project required. Course grade determined by the instructor. Maximum of 6 sh applied to minimum in major.

PY: PHYSICS

Department of Physics
College of Natural Sciences and Mathematics

PY 101 PHYSICS AND OUR ENVIRONMENT 3c-0l-3sh
An overview of the areas of energy, transportation, and pollution. These topics are approached via the relevant concepts of physical science and physics.

PY 110 SOLAR ENERGY 3c-0l-3sh
Prerequisite: SC 105 or equivalent
Overview of the solar energy field including the feasibility of solar technologies in comparison with other energy technologies. Science of solar collection, storage, and applications.

PY 111 PHYSICS I LECTURE 3c-0l-3sh
Prerequisites: Elementary algebra and trigonometry
General college physics; mechanics, wave motion, and sound.

PY 112 PHYSICS II LECTURE 3c-0l-3sh
Prerequisite: PY 111
Electricity and magnetism, heat, light, atomic and nuclear physics, and an elementary introduction to relativity and quantum theory.

PY 121 PHYSICS I LAB 0c-3l-1sh
Corequisite: PY 111
Physics laboratory at level of Physics I; exercises in mechanics, wave motion, and sound. Lab previously listed as PY 111-2.

PY 122 PHYSICS II LAB 0c-3l-1sh
Corequisite: PY 112
Physics laboratory at level of Physics II; exercises in optics, electricity and magnetism, and radioactivity. Lab previously listed as PY112-2.

PY 131 PHYSICS I-C LECTURE 3c-0l-3sh
Prerequisites: MA 121, 123 or 127, at least concurrently
A calculus-based course in general college physics; topics covered are similar to those covered in Physics 111 but are treated in more depth through the use of calculus.

PY 132 PHYSICS II-C LECTURE 3c-0l-3sh
Prerequisites: MA 122, 124, or 128, at least concurrently
Continuation of Physics I-C; topics covered are similar to those covered in Physics II but are treated in more depth through the use of the calculus.

PY 141 PHYSICS I-C LAB 0c-3l-1sh
Corequisite: PY 131
Sequence of physics laboratory at same level as Physics I-C; exercise in mechanics, wave motion, and sound. Lab previously listed as PY 131-2.

PY 142 PHYSICS II-C LAB 0c-3l-1sh
Corequisite: PY 132
Sequence of physics laboratory at same level as Physics II-C; exercises in optics, electricity and magnetism, and radioactivity. Lab previously listed as PY 132-2.

PY 150 COMPUTER APPLICATION TO PHYSICS LABORATORIES 2c-2l-3sh
Covers applications of microcomputers to laboratory data acquisition. Interfacing design and construction as well as computer repair and machine level computer programming are included.

PY 151 MEDICAL PHYSICS LECTURE 3c-0l-3sh
Development of concepts and principles of physics with a strong emphasis as to their use and application in medical and other biophysical areas.

PY 161 MEDICAL PHYSICS LAB 0c-3l-1sh
Corequisite: PY 151
Experiments dealing with applications of physical principles to the field of medicine. Practical experience with use of electronic equipment, chart recorders, etc., of type found in modern-day medicine will be introduced. Lab previously listed as PY 151-2.

PY 222 MECHANICS I 2c-0l-2sh
Prerequisites: PY 111 or 131; MA 122, 124, or 128
Dynamics of a particle in one, two, and three dimensions, central forces including planetary and satellite motion, energy in particle dynamics, statics, systems of particles.

PY 223 MECHANICS II 2c-0l-2sh
Prerequisites: PY 222, MA 241
Mechanics of a rigid body, constraints, oscillations, wave motion, introduction to Lagrangian and Hamiltonian formulation and relativistic mechanics.

PY 231 ELECTRONICS 3c-3l-4sh
Prerequisites: PY 112 or 132; MA 122, 124, or 128
Circuit theory, transients, vacuum-tube and transistor circuits, frequency response, input and output impedance, feedback and electronic noise. Operational amplifiers and digital electronics.

PY 242 OPTICS 3c-0l-3sh
Prerequisites: PY 112 or 132; MA 122, 124, or 128
Geometrical optics, physical optics, including interference, diffraction, and polarization. Quantum Optics is introduced.

PY 322 ELECTRICITY AND MAGNETISM I 2c-0l-2sh
Prerequisite: PY 222
Electrostatic potential theory, dielectrics, dipole theory, magnetostatics, Maxwell's equation for static fields, and Legendre's polynomials and other approximation methods.

PY 323 ELECTRICITY AND MAGNETISM II 2c-0l-2sh
Prerequisite: PY 322
Time-dependent form of Maxwell's equations, electromagnetic induction, vector potential, magnetism, radiation fields, and poynting vector.

PY 331 MODERN PHYSICS 3c-0l-3sh
Prerequisites: PY 112 or 132; MA 122, 124, or 128
Introduction to particle and wave properties of matter, atomic structure, relativity, solid state and nuclear physics.

PY 342 THERMAL AND STATISTICAL PHYSICS 3c-0l-3sh
Prerequisites: PY 112 or 132; MA 122, 124, or 128
Thermometry, laws of thermodynamics, low-temperature physics, entropy, properties of ideal gas, and an introduction to statistical mechanics.

PY 350 INTERMEDIATE EXPERIMENTAL PHYSICS I 0c-6l-3sh
Prerequisites: PY 242 and 331
Required fundamental experiments in areas of mechanics, optics, modern physics, and heat.

PY 351 INTERMEDIATE EXPERIMENTAL PHYSICS II 0c-6l-3sh
Prerequisite: PY 350
Increasingly sophisticated experiments in essential areas of physics. Analog and digital computers and the Van de Graaff are available.

PY 421 SELECTED EXPERIMENTS I 0c-6l-3sh
Prerequisites: PY 231 and 331
Experiments selected from advanced optics, microwaves, radio and optical astronomy, semiconductor properties, cryogenics, and classic experiments in atomic physics.

PY 432 ADVANCED ELECTRONICS 2c-3l-3sh
Prerequisite: PY 231
Digital measurement, switching circuits, logic circuits, counting, coding, input and output, AD and DA converters, computer organization.

PY 472 NUCLEAR PHYSICS 3c-0l-3sh
Prerequisite: PY 331
Survey of nuclear physics, nuclear size, nuclear mass, reaction theory, types of radioactive decay, nuclear models, nuclear forces, and elementary particles.

PY 473 QUANTUM MECHANICS I 4c-0l-4sh
Prerequisites: PY 222 and 331
Quantum mechanics following methods of Schrodinger and Heisenberg; the theory is applied to properties of harmonic oscillator, hydrogen atom, electron in a magnetic field, and radioactive decay of alpha particles.

PY 474 QUANTUM MECHANICS II 3c-0l-3sh
Prerequisite: PY 473
A sequel to PY 473, general principles of quantum mechanics are further developed. Matrix mechanics, angular momentum theory, time-independent perturbations, variational methods, spin, and introduction to the many-body problem.

PY 480 SEMINAR var-1sh
Speakers from within and outside the university conduct a seminar on a weekly or biweekly basis on different topics of interest in the physics community.

PY 481 SPECIAL TOPICS IN PHYSICS var-1 to 3sh
Varies from semester to semester and covers diverse topics in specific areas of physics. This course number is also used to offer courses under development.

PY 482 INDEPENDENT STUDY IN PHYSICS var-1 to 6sh
With departmental permission, an advanced student may investigate one or more areas of physics in the student's interest. Work is supervised by a physics faculty member but does not necessarily involve regular lecture or laboratory hours.

PY 490 SOLID STATE PHYSICS 3c-0l-3sh
Prerequisites: PY 223 and 331
Reciprocal lattice, crystal structure, the quantization of fields to produce quasi-particles such as phonons, magnons, excitons. Fermi gas of electrons, energy bands, semiconductor crystals, and photoconductivity.

QB: QUANTITATIVE/BUSINESS

Department of Finance and Management Information Systems
College of Business

QB 215 BUSINESS STATISTICS 3c-0l-3sh
Prerequisite: MA 121, MA 214
Expands upon the probabilistic concepts developed in MA 214 to orient the student toward managerial decision making using quantitative methodologies. Topics covered include classical regression analysis, forecasting, Bayesian decision theory, linear programming, and simulation.

QB 360 MANAGEMENT AND PRODUCTION CONCEPTS 3c-0l-3sh
Prerequisite: Upper division students only. IM 241, QB 215.
Analysis of the role and functions of management to include planning, organizing, staffing, directing, and controlling. Study of management in organizations with attention to tasks and functions, and to contributions of various disciplines. Production management as an example of functional management; emphasis on acquisition, transformation, and distribution of physical materials. QB 360 will emphasize the quantitative approach to production, and MG 360 will emphasize the qualitative approach. Those students who enroll in QB 360 may not enroll in MG 360. Finance and management information systems majors are expected to enroll for QB 360 rather than MG 360.

QB 380 INTRODUCTION TO MANAGEMENT SCIENCE 3c-0l-3sh
Prerequisites: QB 215, upper division students only
Discussion and application of mathematical models used in managerial decision making. Linear programming, Markov processes, queuing theory, EOQ models, and simulation techniques are among the topics covered.

RH: REHABILITATION

Department of Special Education and Clinical Services
College of Education

RH 200 INTRODUCTION TO REHABILITATION 3c-0l-3sh
A foundation for subsequent courses in the rehabilitation sequence. It is also available as a prerequisite or basic course for students interested in the rehabilitation of individuals in our society. Content includes the philosophy, history, major concepts, and current problems and issues.

RH 220 NEUROLOGICAL BASIS OF DISABILITY 3c-0l-3sh
Prerequisites: BI 151, EX 120, RH 200
Study of the brain and spinal cord with emphasis on cortical and subcortical mechanisms instrumental in normal motion, coordination, and bodily sensation, exclusive of vision and hearing. Discussion and demonstration of conditions of cerebral palsy, poliomyelitis, traumatic paraplegias, cerebrovascular accident, Parkinson's disease, multiple sclerosis, and rehabilitative procedures.

RH 311 REHABILITATION OF THE BLIND AND THE DEAF 3c-0l-3sh
Prerequisites: RH 220, PC 101
Structure and function of visual and auditory systems with emphasis on the importance of seeing to mobility in environment and on hearing to the development of human communication. Discussion of causes of visual and auditory pathologies, braille, mobility training, speech reading and amplification, and other procedures of rehabilitation.

RH 312 PSYCHOLOGICAL BASIS OF DISABILITY 3c-0l-3sh
Study of emotional and social responses which govern behavior and relationships of handicapped individuals and rehabilitation workers alike, with emphasis on the role of disability in formation of the concept of human worth.

RH 321 PRINCIPLES AND METHODS OF REHABILITATION 3c-0l-3sh
Prerequisites: RH 220, RH 311, RH 312, and permission of instructor
Delineates the roles of members of professional disciplines of medicine, psychology, prosthetics, orthodontics, audiology, speech pathology, physical and occupational therapy in restoration of the handicapped; use of diagnostic information; significance and interpretation of medical examination; role of rehabilitation counselor in the agency.

RH 322 REHABILITATION CASE STUDY AND INTERPRETATION 3c-0l-3sh
Prerequisites: RH 220, RH 311, RH 312, or permission of instructor
Purpose and techniques of case history taking; meaning and evaluation of diagnostic information; psychological evaluation in terms of mental ability, personality, attitudes, and dexterity skills; role of disabled individual's family in planning of services, referrals and report writing.

RH 360 REHABILITATION COUNSELING: STRATEGIES 3c-0l-3sh
Prerequisites: Permission, Rehabilitation majors only
Designed to help students develop competencies in using various counseling techniques with handicapped persons. Various theories of counseling will be explored relative to the rehabilitation setting. It will provide basic counseling skills to upperclass Rehabilitation majors prior to field training.

RH 411 REHABILITATION OF THE POST-SURGICAL PATIENT 3c-0l-3sh
Prerequisite: RH 220
Influence of prospective surgery on human emotion and outlook; the effect of alteration or removal of body parts on personality and physical skills. Study of mastectomy, colostomy, laryngectomy, limb amputation, reconstruction of facial disfigurement, cardiovascular disease, and residual capabilities.

RH 412 OCCUPATIONAL ASPECTS OF REHABILITATION 3c-0l-3sh
Prerequisites: RH 220, RH 311, or permission of instructor
The realism of the world of work and relationship of gainful employment to human autonomy and decision-making. Types of jobs, levels of required skills, potential capabilities of the handicapped relative to specific job responsibilities, methods of assessing potential job success, and sheltered workshops.

RH 421/441 FIELD TRAINING IN REHABILITATION var-12sh
Prerequisites: All major courses in program
Emphasizes development of the student rehabilitation coordinator by working with disabled clients in a public or private agency. Writing and analysis of case reports, counseling of clients, understanding of agency responsibilities and limitations, referral, follow-up, and final evaluation of the client's ability to function with various degrees of autonomy.

RH 422 REHABILITATION PRACTICUM 2c-0l-2sh
Taken concurrently with RH 421 and RH 441
Discussion of current topics of interest in the field, such as state and federal legislation, new prosthetic advances, proposals of the National Rehabilitation Association, or recent techniques in working with specific disabilities.

RH 460 ADVANCED REHABILITATION COUNSELING 3c-0l-3sh
Prerequisite: RH 360
Selected counseling techniques studied and practiced under supervision. Application will be utilized in roles that will approximate the kind of clients encountered in field training.

RH 484 DIRECTED REHABILITATION ACTIVITIES var-1sh
Prerequisites: Permission, Rehabilitation majors only
Pre-field training experience working with handicapped clients in local facilities. Concrete experience will help the students integrate classroom instruction with field experiences.

RS: RELIGIOUS STUDIES

Department of Philosophy and Religious Studies
College of Humanities and Social Sciences

RS 100 INTRODUCTION TO RELIGION 3c-0l-3sh
A beginning approach to the study of religion. Questions discussed will include the nature of religion, types of religion, origins of religion, conceptions of deity, the religious nature and destiny of man, religion and science, religion and society, and contemporary religious issues.

RS 110 WORLD RELIGIONS 3c-0l-3sh
History, comparative theology, ritual, and contemporary influences of world's major religions. A nonsectarian study of religions such as Hinduism, Buddhism, Confucianism, Taoism, Shinto, Zoroastrianism, Judaism, Christianity, and Islam.

RS 200 RELIGION AND CULTURE: THEIR INTERACTION 3c-0l-3sh
A systematic study of the interaction of religions and various components of culture, as a way of understanding the phenomenon of religion. The approach is functional and descriptive; it uses case studies which are chronologically and culturally diverse, covering such areas as religion and politics, economics, arts, science, and literature.

RS 210 WORLD SCRIPTURES 3c-0l-3sh
Major sacred writings of Hindu, Buddhist, Zoroastrian, Moslem, Confucian, Taoist, and Judeo-Christian traditions will be studied from point of view of their religious significance.

RS 250 BIBLICAL INTERPRETATIONS 3c-0l-3sh
An introduction to scholarly methods and major themes necessary to understanding of the Old and New Testaments of Judeo-Christian documents.

RS 260 AMERICAN RELIGIOUS DEVELOPMENT 3c-0l-3sh
A survey and analysis of topics which depict the role of religion in the U.S., e.g., American Indian religion; R & the discovery/colonization/immigration trends of the U.S.: R and the Constitution; indigenous religious movements; black religion; ecumenism; atheism; cults; mass media and R; religion in Indiana County.

RS 312 BIBLICAL HISTORY AND PALESTINIAN ARCHAEOLOGY 3c-0l-3sh
An investigation of religio-historical traditions of the Bible in light of archaeological research. Will include study of archaeological method and interpretation, discoveries in Egypt, Mesopotamia, and Syro-Palestine as background for understanding the traditions and religious practices and beliefs of Israel, and special questions surrounding the Patriarchal narratives, the Exodus and Conquest, Israel under David and Solomon, the Dead Sea Scrolls, and N.T. times.

RS 370 RELIGIONS OF CHINA AND JAPAN 3c-0l-3sh
A study of Confucianism, Taoism, Buddhism, Shinto, and popular religion in China and Japan, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

RS 375 RELIGIONS OF INDIA 3c-0l-3sh
A study of Hinduism, Indian Buddhism, Jainism, and Sikhism, including historical and theological foundations, development of thought, contemporary expressions, and encounters with the modern world.

RS 380 ISLAM 3c-0l-3sh
A study of Islam including historical and theological foundations, developments of thought, contemporary expressions, and encounters with the modern world.

RS 410 WESTERN RELIGIOUS THOUGHT IN DEVELOPMENT 3c-0l-3sh
Theological development of the Judeo-Christian religious tradition, approached through an in-depth study of selected writings from the early Church Fathers to the Protestant Reformers.

RS 440 CONTEMPORARY WESTERN RELIGIOUS THOUGHT 3c-0l-3sh
Introduction to thought of such contemporary theologians as Bonhoeffer, Buber, Bultmann, Kierkegaard, Teilhard, Tillich, Barth, Brunner, and Niebuhr.

RS 481 SPECIAL TOPICS 3c-0l-3sh
Topical courses which will vary from semester to semester. See current schedule of classes.

RS 482 INDEPENDENT STUDY var-1-6sh
Individual students wishing to pursue religious studies interests not covered in the department's regular offering may do so by seeking approval for independent study. Make inquiry of the chairperson. Upon approval students are guaranteed at least five hours of faculty time per credit. All programs of study must be accepted by the department as a whole. May be taken more than once to maximum of 6 sh (This option is available to both religious studies majors and nonmajors.)

RS 482 INDEPENDENT STUDY: HONORS 3c-0l-3sh
Prerequisites: 3.00 QPA, 15 sh in Religious Studies and 3.20 average in departmental courses Majors in Religious Studies are invited to take 3 sh of independent study designated "Honors Project." Upon satisfactory completion, graduation with departmental honors is possible.

RT: RESPIRATORY THERAPY

Department of Allied Health Professions
College of Human Ecology and Health Sciences

RT 326 RESPIRATORY CARE CLINICAL PRACTICE I var-3sh
First exposure to patient care. Introduction and practice of basic respiratory care treatment modalities receive emphasis.

RT 327 PHARMACOLOGY 3c-0l-3sh
Introduction to pharmacology and therapeutics. Emphasis placed on the drugs used in respiratory care. Drug classification, action, usage, dosage, and availability will be discussed.

RT 328 INTRODUCTION TO RESPIRATORY CARE 4c-0l-4sh
Topics include medical terminology and an overview of cellular structure and function. Emphasis is placed on neurophysiology, respiratory anatomy, and physiology.

RT 329 RESPIRATORY CARE INSTRUMENTATION 4c-0l-4sh
Introduction to basic respiratory care equipment and related procedures. Special emphasis will be placed upon the rationale and techniques of oxygen administration.

RT 330 CARDIOPULMONARY RESUSCITATION 2c-0l-2sh
Comprehensive analysis of tne principles and practices of numerous methods of resuscitation.

RT 331 INTRODUCTION TO VENTILATOR MANAGEMENT 1c-0l-1sh
This course is designed to establish competence in changing ventilator tubing circuitry in the laboratory situation. Introductory principles, techniques, and theory of ventilator application will also be explored.

RT 333 RESPIRATORY CARE CLINICAL PRACTICE II var-6sh
Treatment procedures introduced in Clinical I are continued with greater emphasis on independence. Specialty rotations are added to broaden exposure to respiratory care and critical care.

RT 334 RESPIRATORY CARE INSTRUMENTATION AND APPLICATION 4c-0l-4sh
Provides students with a comprehensive knowledge of mechanical ventilation. The care of critically ill and physiologic consequences of mechanical ventilation will be discussed.

RT 335 NURSING ARTS 3c-0l-3sh
An overview of the history of respiratory care and nursing. Topics include medical records, infection control, sterilization, and psychosocial aspects of illness.

RT 336 CARDIOPULMONARY EVALUATION AND CLINICAL CORRELATION 4c-0l-4sh
Disease states of the pulmonary and related systems are investigated in progression from etiology through treatment and prognosis.

RT 337 INTRODUCTION TO PULMONARY FUNCTION STUDIES 1c-0l-1sh
The student is introduced to the basic principles of lung volumes, capacities, and their measurement. Blood gas sampling and electrodes are also explored.

RT 426 RESPIRATORY CARE CLINICAL PRACTICE III var-6sh
Respiratory Care treatment procedures are continued with emphasis on improving proficiency and refining skills. Students will make rounds with physicians.

RT 427 APPLIED PULMONARY PHYSIOLOGY 4c-0l-4sh
Various aspects of pulmonary physiology will be discussed and applied to acid-base and blood gas analysis and interpretation.

RT 428 ESSENTIALS OF ELECTROCARDIOGRAPHY 2c-0l-2sh
This course is designed to acquaint the student with basic principles in cardiac electro-diagnostics. Topics include the technique of ECG testing and fundamentals of ECG arrythmia recognition.

RT 429 DESIGN AND FUNCTION OF A RESPIRATORY CARE PROGRAM 2c-0l-2sh
Basic management principles as they apply to the hospital setting and in particular respiratory care departments and schools will be discussed.

RT 430 PULMONARY FUNCTION STUDIES 2c-0l-2sh
Prerequisite: RT 337
Principles, techniques, and equipment employed in pulmonary diagnostics are explored. Diagnostic studies include basic spirometry, flow- volume loops, diffusion studies, exercise testing, bronchoprovocation studies, and small airways diagnostics.

RT 431 PEDIATRIC RESPIRATORY CARE 1c-01-1sh
Prerequisites: RT 334 and RT 336
The application of respiratory care to children ages 6 months-15 years is explored. Cardiopulmonary pathophysiology and treatment for the following disorders are discussed: Croup, Epiglotitis, Asthma, Cystic Fibrosis, Congenital Heart Defects, Abdominal and Chest Wall Defects.

RT 433 RESPIRATORY CARE CLINICAL PRACTICE IV var-7sh
Rotations on treatment and intensive respiratory care are continued. Advanced rotations are included.

RT 434 NEONATAL RESPIRATORY CARE 3c-0l-3sh
Basic terminology, anatomy, and pathophysiology of obstetric, fetal, neonatal, and pediatric patients will be presented.

RT 436 RESPIRATORY CARE TEACHING 2c-0l-2sh
An introduction to respiratory education.

RT 437 METHODS IN CRITICAL CARE 2c-0l-2sh
Critical Care diagnostic and therapeutic modalities pertinent to respiratory care will be discussed. Topics include invasive and noninvasive cardiac monitoring, pulmonary monitoring, neurological assessment, ventilator commitment, and discontinuance.

RT 438 CARDIOPULMONARY REHABILITATION 1c-0l-1sh
Techniques and principles associated with cardiopulmonary rehabilitation programs are surveyed. Topics also include the management of chronic pulmonary disease in the home and the application of respiratory equipment and mechanical ventilators in this setting.

RT 481 SPECIAL TOPICS IN RESPIRATORY CARE var 1-3sh
This course varies from semester to semester covering diverse topics in specific areas of Respiratory Therapy not covered in regular course work.

SA: SAFETY SCIENCES

Department of Safety Sciences
College of Human Ecology and Health Sciences

SA 101 INTRODUCTION TO OCCUPATIONAL SAFETY AND HEALTH 3c-0l-3sh
Covers theory and history of industrial hazard control, effects of hazards and failures on organizational control and productivity, safety and health legislation, accident causation, organization and administration of safety and health programs, aspects of recognizing, evaluating, and understanding control of safety and health hazards, acquiring hazard data, hazard analytical tools, communication techniques in safety and health management, and the role of interfacing management systems in hazard control.

SA 102 INTRODUCTION TO MINE SAFETY 3c-0l-3sh
Designed to provide the student with an in-depth background of the problems involving mine safety. A historical approach to coal and mineral mining is reviewed; legislative influences such as the Federal Coal Mine Health and Safety Act, the Metal and Nonmetal Mine Health and Safety Act, and the Occupational Safety and Health Act discussed in depth; mining techniques, methods, and systems are discussed. Management of mine health and safety programs is presented. Federally mandated training of employees is covered.

SA 111 PRINCIPLES OF INDUSTRIAL SAFETY I 3c-0l-3sh
Prerequisite: SA 101 or SA 102
Stresses understanding the complexity of industrial hazard control problem by thoroughly examining elements of safety and health enumerated in OSHA promulgated standards. Emphasis given to plant layout and design, materials handling, machine guarding, walking and working surfaces, hazardous materials and combustible liquids, boilers and unfired pressure vessels.

SA 211 PRINCIPLES OF INDUSTRIAL SAFETY II 3c-0i-3sh
Prerequisite: SA 101 or SA 102
Stresses understanding the complexity of the industrial hazard control problem by thoroughly examining elements of safety and health enumerated in the OSHA promulgated standards. Emphasis on welding and cutting operations, electrical safety, chemical safety, personal protective equipment, industrial sanitation, and construction safety.

SA 231 PRINCIPLES OF MINE SAFETY I 3c-0l-3sh
Prerequisite: SA 102
Focuses on the various aspects of mining operations such as slope and shaft development; mine

design; ground control; hoisting; man-trips; haulage; mining equipment; mine emergency planning and procedures; mine communications and maintenance.

SA 232 PRINCIPLES OF MINE SAFETY II 3c-0l-3sh
Prerequisite: SA 102
Covers surface mining operations such as slope stability, equipment, ground water and control. Mine-related processing operations are discussed. Provides an in-depth study of the various controls of electrical hazards and ignition sources such as permissible equipment, electrical distribution systems. The uses of explosives and blasting practices, handling, storing, and transportation with emphasis on causes of explosion involving dust and gases are discussed.

SA 301 HEALTH HAZARD IDENTIFICATION 3c-0l-3sh
Prerequisites: CH 102, PY 111, MA 122, BI 151
Provides an understanding of the primary health hazards found in industry and their effects on the human body. Students learn to recognize hazards involved with air contaminants, noise, heat, radiation, chemicals on the skin, and other stressors. Emphasis is placed on the study of occupational disease, industrial toxicology, and use of threshold limit values.

SA 302 HEALTH HAZARD EVALUATION 2c-3l-3sh
Prerequisites: SA 301, PY 112, MA 217
A lecture/laboratory course which provides a basic understanding of techniques used in measuring and evaluating the magnitude of health hazards in industry. Laboratory sessions provide experience in air sampling, noise measurement, heat measurement, particle size analysis, chemical analysis, and evaluation of industrial ventilation systems.

SA 303 CONTROL OF HEALTH HAZARDS 3c-0l-3sh
Prerequisites: SA 301, PY 112, MA 217
Study of engineering, administrative, and personal protective equipment as methods of reducing or eliminating hazards to the health of industrial workers. Topics covered include industrial ventilation, noise control, heat control, radiation control, personal protective equipment, and industrial health program.

SA 311 INDUSTRIAL FIRE PROTECTION 3c-0l-3sh
Prerequisites: CH 102, PY 112, SA 211
Introduces fundamental concepts in protection of industrial workers and property from fire and explosion. Fire chemistry, control of ignition sources in industry, and properties of combustible materials are discussed. Fire detection and extinguishment are covered along with building construction for fire prevention, life safety, fire codes, and related topics.

SA 345 SYSTEMS SAFETY ANALYSIS 2c-3l-3sh
Prerequisites: SA 111, SA 211, MA 217
Focuses on the evaluation of system designs using detailed system analysis techniques. Topics covered include system definition, economics of systems safety, systems safety methodology, ergonomic approaches, mathematics of system analysis, including statistical methods, Boolean algebra, and reliability. Preliminary hazard analysis, task analysis, failure mode and effect analysis, fault tree analysis, and exercises in the application of fault tree analysis to hardware and man/machine systems. Practical analysis work is accomplished in laboratory sessions.

SA 347 ERGONOMICS 2c-3l-3sh
Prerequisites: SA 301, BI 151
An exploration of the principles which control human performance and its effect upon the safety and reliability of systems. Engineering anthropometry, biomechanics of motion and work posture, work physiology, and performance measurement are covered in the context of their application in workplace design. Students will be instructed in methodologies for analysis tasks and human performance requirements. Important human limitations are studied in laboratory sessions.

SA 370 FLEET SAFETY 3c-0l-3sh
Prerequisites: SA 101, Junior Standing
Includes topics involved with the development and operation of motor fleet safety programs: driver selection and training, accident investigation and record keeping, equipment safety features, preventive maintenance, and driver incentive programs.

SA 380 INSTITUTIONAL SAFETY MANAGEMENT 3c-0l-3sh
Prerequisite: Junior Standing
Historical aspects of safety for both private and public institutions; introduction to trends in liability and institutional safety regulations. Distinctions will be made between employee, visitor, and patient hazards and their control.

SA 401 MINE VENTILATION 2c-3l-3sh
Prerequisites: PY 112, SA 102, MA 122 or consent
Study of mine ventilation principles and practices which provide a basic knowledge in design and operation of mine ventilation systems. The topics of airflow physics, ventilation standards, fan fundamentals, pressure losses, required air flows, and overall design are discussed. Specific problems in mine ventilation will be solved.

SA 412 EVALUATION OF SAFETY PROGRAM EFFECTIVENESS 3c-0l-3sh
Prerequisites: MA 217, Junior Standing
Teaches reasons and importance of evaluating the effect of safety and health innovations on organization performance, devising measuring systems capable of extracting accurate, meaningful data, methods of collecting, codifying, and processing accident-injury information, and utilization of data retrieval systems.

SA 441 ACCIDENT INVESTIGATION 3c-0l-3sh
Prerequisite: SA 101, Junior Standing or consent
Focuses on various aspects of accident investigation such as recent theories associated with accident causes, investigative techniques, data acquisition, structure of investigative reports, management responsibilities, and remedial actions. Particular emphasis on determining sequence of events to develop management actions which will prevent recurrence of accidents.

SA 445 PRODUCT SAFETY 3c-0l-3sh
Prerequisites: MA 217, Senior Standing or consent
Traces flow of applicable legislation dealing with consumerism and product safety. Corporate liability for product safety emphasized through case studies. Student familiarized with evolving role of Consumer Product Safety Commission. Corporate management of product development and safety detailed with emphasis on systems safety analysis, standards, and- product testing.

SA 461 AIR POLLUTION 3c-0l-3sh
Prerequisites: SA 301 or consent
Focuses on various major aspects of the air pollution problem. Includes sources of pollution, evaluation and engineering of pollutants, government regulations, atmospheric chemistry and dispersion, and human and nonhuman effects. Particular emphasis on information that is practical for the safety management, industrial health, or environmental health professional.

SA 462 RADIOLOGICAL HEALTH 3c-0l-3sh
Prerequisites: SA 301 or consent
Study of problems associated with ionizing radiation in human environment. Emphasis given to biological effects, radiation measurement, dose computational techniques, exposure control, and local and federal regulations. Study and use of various radiological instruments included.

SA 481 SPECIAL TOPICS IN SAFETY SCIENCES 3c-0l-3sh
Prerequisite: Permission of instructor
An elective offering in which the specific topic may vary.

SA 482 PROCESS SAFETY IN THE CHEMICAL INDUSTRY 3c-0l-3sh
Prerequisites: SA 301, SA 311, SA 345 and Senior Standing, or permission of instructor
This course is designed to cover all important aspects of loss prevention as it is practiced in the chemical process industries. Its objective is to prepare the safety professional so that he/she may be able to work more effectively with chemists and chemical engineers in joint hazard identification, evaluation, and control projects.

SA 493 INTERNSHIP var-6sh
Prerequisite: Senior Standing, all required courses in major
All Safety Science majors are expected to take this course. It is conducted away from the university at various industrial enterprises. Students are required to provide their own transportation. Intended to allow the student to apply hazard assessment and safety management practices to actual industrial situations while at same time being exposed to complexities of industrial environment.

SA 493-3 INTERNSHIP 12sh
Prerequisites: Senior Standing, all required courses in major, minimum of 2.5 overall and 2.8 GPA in major, and consent
It is a practicum conducted at an approved occupational setting up to 500 miles away from IUP. Students are required to conduct four major projects over the course of the summer. One project will be from each of the following areas: Safety Management, Industrial Safety, Industrial Hygiene, and Fire Protection. Students are accountable to an on-site supervisor and are required to remain in close contact with a Safety Sciences faculty coordinator. Offered in summer only.

SC: SCIENCE

Department of Chemistry/Department of Physics
College of Natural Sciences and Mathematics

SC 105 PHYSICAL SCIENCE I 3c-2l-4sh
A descriptive and conceptual course in physics for the non- Science major. High school physics is not a prerequisite. Course content is designed to develop an understanding and appreciation of the physical world around us, to produce changes in attitude and background essential for our modern society, and to clarify the following topics: motion, heat, sound, light, electricity, magnetism, and the structure of matter.

SC 106 PHYSICAL SCIENCE II 3c-2l-4sh
A basic course in environmental and consumer chemistry for the non-Science major. High school chemistry is not a prerequisite. Major topics include man's use and abuse of soil, water, air and energy resources, global food production and hunger, the nuclear industry and the threat of nuclear war. Consumer topics include vitamins and nutrition, food additives, pesticides, and drugs.

SC 401 THE GROWTH OF SCIENCE AND ITS CONCEPTS I 3c-0l-3sh
Traces the development of science concepts and their interaction with growing society of Western Civilization, from earliest beginnings to the time of Newton. Treatment is nonmathematical.

SC 402 THE GROWTH OF SCIENCE AND ITS CONCEPTS II 3c-0l-3sh
Influence and development of concepts of science in Western Civilization are studied from Newton to present time; stress placed on nonmathematical understanding of the basic ideas.

SH: SPEECH AND HEARING
Department of Special Education and Clinical Services
College of Education

SH 111 FUNDAMENTALS OF SPEECH AND HEARING 3c-0l-3sh
(Prerequisite for all other required courses in the division except Phonetics)
Introduction to the study of physiological, acoustical, and scientific processes involved in production and reception of speech. The genetic development of speech sounds and factors that hinder or facilitate speech and language acquisition.

SH 122 PHONETICS 3c-0l-3sh
Detailed study of phonemes of American-English speech from a physical and acoustical point of view. Development of proficiency in use of International Phonetic Alphabet for transcription and translation of speech sounds.

SH 222 INTRODUCTION TO AUDIOLOGY 3c-0l-3sh
The study of auditory function, anatomy of auditory mechanism, psychophysics of sound, types and causes of hearing loss, measurement of hearing, and educational considerations for hearing-handicapped child.

SH 234 LANGUAGE DEVELOPMENT 3c-0l-3sh
Study of the development of an interpersonal communication system; language as a system of symbols for communication; the structure of the English language, including phonology, syntax, and semantics with emphasis on the generative evolvement of sentences. Highlighting the neurological, social, and psychological bases of language development.

SH 242 INTRODUCTION TO SPEECH SCIENCE 3c-0l-3sh
Study of the communication process with emphasis on physical characteristics of sound production, transmission and perception of the sound, and the evolvement and use of symbols for meaningful communication. The scientific principles of normal oral communication are stressed, and language learning is recognized as a basis for oral communication.

SH 251 ANATOMY AND PHYSIOLOGY OF THE SPEECH AND HEARING MECHANISM 3c-0l-3sh
Consideration of genetic development, structure, and function of the organs of speech and hearing. Anatomical systems involved in respiration, phonation, articulation, and hearing and relationships between systems in production and reception of speech.

SH 254 CLASSROOM MANAGEMENT OF LANGUAGE DISORDERS 3c-0l-3sh
Study of aspects of speech, language, and hearing problems pertaining to classroom situation. Types of speech and hearing disorders, conducting speech and language improvement lessons, classroom aids for the speech- and hearing-impaired child, and school and community resources for these children. (Required for majors in Education of the Exceptional and suggested for majors in Elementary Education)

SH 306 ARTICULATION AND LANGUAGE DISORDERS 3c-0l-3sh
Prerequisites: SH 111, 242, 251, 234
Exploration of the processes related to developmental articulation and language disorders from birth through adolescence. Instruction in the principles underlying modification of these disorders. Preparation of management programs and observation in the Speech and Hearing Clinic required.

SH 308 STUTTERING AND VOICE DISORDERS 3c-0l-3sh
Prerequisites: SH 111, SH 242, SH 251, SH 234
Introduction to the developmental, psychogenic, and organic bases for stuttering and voice disorders. Instruction in principles underlying treatment of these disorders with emphasis on anatomical deviations and laryngeal dysfunction. Preparation of management plans and observation in Speech and Hearing Clinic required.

SH 311 AURAL REHABILITATION 3c-0l-3sh
Prerequisite: SH 222
Consideration of the effects of varied degrees of hearing loss sustained by individuals at different stages of development and study of total education and rehabilitative procedures for the hard-of-hearing child or adult.

SH 312 ORGANIZATION AND ADMINISTRATION OF SPEECH AND HEARING PROGRAMS 3c-0l-3sh
Prerequisite: SH 111
(Meets requirement for Professional Education course) Establishment and maintenance of speech and hearing programs within various administrative organizations, particularly in the public schools. Techniques of client identification, scheduling, record keeping, appropriate referral, material and equipment selection, teacher and parental counseling, and the development of coordinated professional and interdisciplinary procedures.

SH 314 ASSESSMENT OF SPEECH AND LANGUAGE DISORDERS 3c-0l-3sh
Prerequisites: SH 111, SH 242, SH 251, SH 234
Introduction to formal and informal procedures for evaluating speech and language disorders; selection of tests and techniques; reliability and validity of procedures; interviewing techniques appropriate to case history. Preparation of evaluation and case history reports; preparation of management programs.

SH 320 SPEECH CLINIC varl to 3sh
Prerequisite: All major courses except SH 312
Experience in working with individuals or groups of persons who exhibit speech or hearing problems. Lesson planning, writing of reports, and case histories of a detailed nature.

SH 354 AUDIOMETRY FOR PUBLIC SCHOOL NURSES 3c-0l-3sh
Intensive review of physiology of hearing; etiologies and classifications of hearing loss; use of audiometric testing equipment in schools; interpretation of audiogram; and role of nurse in public health hearing programs. Student may substitute SH 222 with permission of adviser.

SH 412 CLEFT PALATE 3c-0l-3sh
Study of overall problems associated with the phenomenon of cleft lip and palate with special emphasis in areas of speech, hearing, and language. Included in scope will be human embryology, with specific emphasis on oral facial development; physical remediation, including both surgical and prosthetic repair; effects of clefts on structure and function of speech and hearing mechanism; role of speech correctionist on cleft palate team; evaluation and current remedial procedures for speech, hearing, and language problems.

SO: SOCIOLOGY

Department of Sociology/Anthropology
College of Humanities and Social Sciences

SO 151 PRINCIPLES OF SOCIOLOGY 3c-0l-3sh
Scientific study of structure and functioning of human societies, with special attention to factors responsible for organization and transformation of sociocultural systems. Specific course content varies from one instructor to another.

SO 231 CONTEMPORARY SOCIAL PROBLEMS 3c-0l-3sh
Exploration of some pressing problems currently endemic to Western society. Problems are defined and solutions explored in light of historical, political, economic, social, and anthropological data.

SO 233 CULTURAL SYMBOLISM: LANGUAGE IN CULTURE AND SOCIETY 3c-0l-3sh
Focuses on social and cultural functions of language. Particular emphasis on analysis of non-Western languages.

SO 237 WORLD CULTURES 3c-0l-3sh
Orientation to the study of cultural diversity in human societies. Emphasis on determinants of cultural variability and the problem of ethnocentrism. Recommended for Social Science Education students who concentrate in Sociology or Anthropology.

SO 251 SOCIOLOGY OF HUMAN SEXUALITY 3c-0l-3sh
Depth analysis of a formerly taboo topic, human sexuality, whereby current information derived from biological, psychological, and sociological research on human relationships is presented to provide a foundation for self-understanding and societal values.

SO 301 CLINICAL SOCIOLOGICAL THEORY 3c-0l-3sh
Prerequisite: SO151
Develops an understanding of how to use micro and macro sociological theory to analyze, assess, and diagnose human problems. Employing case studies, it prepares students to do case work and problem solving of interpersonal, group, and organizational problems and seeks to acquaint students to the broader professional activity of human services.

SO 302 CLINICAL SOCIOLOGICAL PRACTICE 3c-0l-3sh
Prerequisite: SO301
Prepares the students to effect constructive change within individuals, groups, families, and communities. Draws its analysis, diagnosis, and methods from the foundations of sociological theory at the level of intervention with clients.

SO 303 SOCIAL AND CULTURAL CHANGE 3c-0l-3sh
Prerequisite: SO 151
Exploration of current theoretical perspectives on social and cultural change. Special attention given to planned change at the local or regional level.

SO 314 ETHNOLOGY OF NORTH AMERICAN INDIANS 3c-0l-3sh
Survey of culture history and culture area characteristics of Indians of North America. Detailed study of representative groups related to historical, functional, and ecological concepts.

SO 322 CULTURE AND PERSONALITY 3c-0l-3sh
Prerequisites: PC 101, and SO 151 or AN 110
Examination of personality characteristics produced in a given cultural milieu or subgroup. Cross-cultural comparisons and analyses made with respect to child-rearing, male-female role differentiation, bodily movements, suppression, mental disturbance, and religious expression.

SO 332 RACIAL AND ETHNIC MINORITIES 3c-0l-3sh
Prerequisite: SO 151
Study of racial, ethnic, and religious minorities and divergent heritages in our national life.

SO 333 DELINQUENCY AND YOUTH 3c-0l-3sh
Prerequisite: SO 151
Study of social and cultural factors involved in various youth lifestyles, including delinquency. Crosscultural and historical approach used in a review of social norms, social control, and socialization institutions and community-based programs for rehabilitation.

SO 334 POPULATION TRENDS AND PROBLEMS 3c-0l-3sh
Prerequisite: SO 151
Major forces of population change examined. Problems of excessive population growth rates outside of U.S. and declining growth rates in the U.S. analyzed. Threats to ecological stability discussed.

SO 335 ALCOHOL AND DRUG ABUSE 3c-0l-3sh
Prerequisite: SO151
Examines the social issues and problems of alcohol and drug misuse in American society. Legal and illegal substances will be considered, and the causes of substance abuse as well as alternatives will be examined.

SO 336 SOCIOLOGY OF THE FAMILY 3c-0l-3sh
Prerequisite: SO 151
Sociological study of the family from various theoretical viewpoints. Emphasis on the relation between structure and function of the family and the existing and emerging social environment.

SO 337 CHILDHOOD AND SOCIETY 3c-0l-3sh
Prerequisites: SO 151 or AN 110 or PC 101 or permission of the instructor
A crosscultural comparison of child rearing concepts and practices with special attention to the United States both in the present and past. A study of the cultural milieu of children along with sequential adult behavior. Attention is given to divergent world views and role expectations of the child. The course content (involving student participation) is essentially analytical and descriptive rather than applied.

SO 338 URBAN SOCIOLOGY 3c-0l-3sh
Prerequisite: SO151
A critical survey of various models and conceptual frameworks used by urban sociologists. The course examines sociocultural adaptations to urban settings in various times and places, although the emphasis will be upon large-scale industrial and postindustrial societies. The focus is on the social unit of adaptation: often the urban neighborhood, the community, or other small-scale segments of the city.

SO 339 THE COMMUNITY 3c-0l-3sh
Prerequisite: SO 151
Analysis of the social structure of communities on the local level in relation to the national community structure. Examination of current problems and future trends.

SO 340 SOCIOLOGY OF INDUSTRY 3c-0l-3sh
Prerequisite: SO 151
Examination of industrial organizations and their environments. Production systems analyzed in terms of different forms of organization, e.g., bureaucratic, power-equilibrium, and worker-participation. Special attention paid to who defines production, how such definitions are legitimized, and how constraints are placed on such definitions by union and other political organizations.

SO 341 SOCIOLOGY OF EDUCATION 3c-0l-3sh
Prerequisite: SO 151
Examines the place of education in society. Special attention to the development of education in America and its relation to political and economic phenomena. Some attention given to education in other industrial and agrarian societies.

SO 342 SOCIAL AND CULTURAL ASPECTS OF HEALTH AND MEDICINE 3c-0l-3sh
Prerequisite: 6 sh in Sociology or Anthropology
Review of the fields of medical sociology and anthropology. Focus on such topics as health and illness in cross-cultural context, aging, social and psychological aspects of pain, and social organization of health facilities and services. Definitions of limits of "life" and "death" in context of new technological and ethical issues such as euthanasia, genetic counseling, and organ transplants also discussed.

SO 345 INTERPERSONAL DYNAMICS 3c-0l-3sh
Prerequisite: SO 151
Study of the interaction between and among individuals and groups in various social settings. Emphasis on small groups, socialization, social influence and compliance, person perception, collective behavior, and mass communication.

SO 348 SOCIOLOGY OF WORK 3c-0l-3sh
Prerequisite: SO151
Focuses upon the sociological examination of the various forms of labor, employment, and unemployment present in industrial societies. Examines the nature of work and unemployment in the modern era and how these forms are being transformed in the present period.

SO 352 SOCIOLOGY OF RELIGION 3c-0l-3sh
Prerequisite: SO 151
Nature of religion as a universal social institution. Universal and variable features of human religious activity examined, with special attention to causes and consequences of religious belief and action. Specific topics discussed include theories of the origin and persistence of religion; evolution of variant forms of religion; relationship between religion and other social institutions, especially economy, polity, and science; types of religious organization in complex societies; revitalization and messianic movements; and the process of secularization.

SO 354 SEXUAL INEQUALITY IN HUMAN SOCIETIES 3c-0l-3sh
Prerequisite: SO 151
Explores current perspectives on the situations faced by men and women in the United States and other societies. Major topics examined include sex role socialization, sexual inequality in everyday life, the maintenance of sexual inequality, and the sexes in relation to economy and family in various societies.

SO 357 SOCIOLOGY OF AGING 3c-0l-3sh
Prerequisite: SO 151
Introduction to various problems faced in the process of growing older. Attitudes of society toward elderly and social and cultural impact of an aging U.S. population examined.

SO 371 CULTURAL AREA STUDIES 3c-0l-3sh
Prerequisite: SO 151
Analysis of prehistoric, historic, and contemporary aspects of ethnological studies in a culture area. Social organization, linguistic ties, cultural ecology, folklore, mythology, artistic expressions of the peoples, and their world view are examined. The course may be repeated UNDER DIFFERENT LETTER DESIGNATIONS according to selection of culture area by instructors responsible for the course.

THE FOLLOWING CULTURE AREAS ARE AVAILABLE:
SO 371A CULTURAL AREA STUDIES: JAPAN
SO 371B CULTURAL AREA STUDIES: CHINA
SO 371C CULTURAL AREA STUDIES: CARIBBEAN
SO 371D CULTURAL AREA STUDIES: NORTHERN EUROPE

SO 405 COMMUNITY ORGANIZATION 3c-0l-3sh
Prerequisite: SO151
Examination of approaches used in community organization practice at the neighborhood and other community levels. Areas of emphasis include intergroup relations, community development, social conflict and consensus, and community problem solving.

SO 421 SOCIOLOGY OF MASS MEDIA 3c-0l-3sh
Prerequisite: SO151
Examines the development of mass media as dominant cultural forms within advanced industrial societies within the twentieth century. Emphasizes critical understanding of the sociohistorical development, the underlying assumptions, and the social implications of the advance of mass media.

SO 427 SPOUSE ABUSE 3c-0l-3sh
Prerequisite: SO151
Considers the range of theoretical explanations for the pervasive violence between husband and wife. Particularly examines the research on wife battering and the implications of this research for programs and policies assisting both the victim and the abuser.

SO 428 CHILD ABUSE 3c-0l-3sh
Prerequisite: SO151
Examines the prevalence, causes, and social implications of physical, sexual, emotional, and neglect forms of child abuse in society. Child abuse will be studied from the individual, family, and societal level perspectives. Potential intervention strategies will also be considered.

SO 435 SOCIAL STRATIFICATION 3c-0l-3sh
Prerequisite: SO 151
Examines "Who gets what and why?" Detailed analysis of bases of power for and cohesion of super-rich, middle class, and poor. Also examines mobility and how policies affect inequality in America.

SO 443 DEVELOPMENT OF SOCIAL THEORY 3c-0l-3sh
Prerequisites: 9 sh in sociology and Junior Standing
Examination of the historical development of the social theory with special attention to the classical theorists and theoretical ideas which have contributed most significantly to modern sociology.

SO 447 MODERN SOCIOLOGICAL THEORY 3c-0l-3sh
Prerequisites: 9 sh in sociology and Junior Standing
Detailed examination of major theoretical issues, perspectives, and controversies occupying center stage in contemporary sociological analysis. Major attention to nature and logic of social theorizing, primary macro-level theoretical perspectives which compete for attention in contemporary sociology, and the nature of new directions currently being taken within sociological theory.

SO 449 SOCIOLOGY OF MARX AND MARXISM 3c-0l-3sh
Prerequisite: Permission of the instructor
A detailed analysis of the major writing of Marx and Engels and an examination of current debates and trends in contemporary Marxism. Special attention will be given to Marx's early writings, historical materialism, and Marxian theory.

SO 455 SOCIAL RESEARCH METHODS 3c-0l-3sh
Prerequisites: 9 sh in sociology and Junior Standing
Examines diverse research designs used in the social sciences, i.e., survey, field study, experiment, documentary, and existing statistical data. Focuses both on logic and practice of social research. Students choose either a number of mini-projects or a major research project.

SO 456 FIELD RESEARCH METHODS 3c-0l-3sh
Prerequisite: SO455 or permission
Examination of methods and practice of sociology and anthropology in the areas of qualitative and field methods. Concentrates upon the development of field notes, interviewing techniques, participant observation, etc. Qualitative methods of sampling and analysis will include theoretical sampling and analytic induction. Brief background research into community, organizational, and group structure will also be emphasized.

SO 457 COMPUTER USE IN SOCIOLOGY 3c-0l-3sh
Prerequisite: Permission of the instructor
Introduces student to use of microcomputer in social science research and practice. Uses a variety of software for clinical sociological applications as well as quantitative analysis of social scientific data. These include client information systems, field notes and downloading such notes, exchanging information between agencies, and statistical analyses for program evaluation and forecasting.

SO 458 POLITICAL SOCIOLOGY 3c-0l-3sh
Prerequisite: SO 151
Examination of the social context of power and politics, with special reference to such topics as who controls the state and state policy; the role of the state in stabilizing capitalism and protecting the power of the upper classes; and labor, civil rights, and welfare rights social movements in America. Especially considers the problems of conducting and implementing social policy research for social change. Cross-listed in Political Science as PS346. Political Sociology.

SO 459 DEVELOPMENT OF SOCIAL SERVICES 3c-0l-3sh
Prerequisite: Permission of the instructor
Examination of ideological and institutional conditions which shape health, unemployment, social security, and welfare services.

SO 480 SOCIOLOGY SEMINAR var1-3sh
Prerequisite: SO 151
Seminar for advanced students devoted to an intensive analysis of specialized issues within the discipline.

SO 481 SPECIAL TOPICS IN SOCIOLOGY 3c-0l-3sh
Prerequisite: SO 151
Focuses on special topics in sociology which are not included in regular course offerings.

SO 482 INDEPENDENT STUDY var1 to 3sh
Prerequisite: Permission of the instructor
An opportunity for students to engage in an in-depth analysis of some topic through consultation with a faculty member. A semester project ordinarily expected.

SO 483 READINGS IN SOCIOLOGY var1 to 3sh
Prerequisite: SO 151
Directed readings on special topics in sociology.

SO 493 INTERNSHIP IN SOCIOLOGY var3-12sh
Prerequisite: Permission of the instructor
Supervised experience in public or private organizations that extends and complements coursework at the university.

SP: SPANISH

Department of Spanish and Classical Languages
College of Humanities and Social Sciences

SP 101 INTENSIVE ELEMENTARY SPANISH var-6sh
Student completes sequence in one semester(6 sh). Using Dartmouth Intensive Language Model (DILM), sections emphasize mastery of spoken language as well as basic language skills. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

SP 121 CONVERSATION I 2c-0l-2sh
This course limits communication to simple survival use of Spanish in daily life. Speech is elicited by questions, orders, instructions, and other clues. A beginning in free communication is encouraged.

SP 122 CONVERSATION II 2c-0l-2sh
The basic objectives of the first semester are pursued with more emphasis on spontaneous communication.

SP 151 SPANISH I 3c-0l-3sh
For beginning students. Primary emphasis is on aural-oral skills. Students will learn to converse and ask questions in simple present time; describe self (interests, routine, plans), family, and others: become acquainted with location of Hispanic populations and elements of their daily lives. Attendance is required.

SP 152 SPANISH II 3c-0l-3sh
A continuation of SP 151. Students will learn to express past time; discuss school, careers, and travel; and give directions, advice, and information. Attendance is required.

SP 151-2 ACCELERATED SPANISH I AND II 6c-0l-6sh
By attending class 6 hours each week, the student completes the elementary sequence (6 credits) in one semester. The accelerated sections present the same basic language skills that are taught in the regular SP 151-152 classes with slightly greater emphasis on the mastery of the spoken language.

SP 201 INTENSIVE INTERMEDIATE SPANISH var-6sh
Student completes sequence in one semester(6 sh). Using Dartmouth Intensive Language Model (DILM), students develop language skills with emphasis on oral competency. Classes are 45 minutes each; drill sessions are 40 minutes each and meet Monday through Friday.

SP 221 CONVERSATION III 2c-0l-2sh
This course provides students with an opportunity to practice their linguistic skills and to further develop their oral communication skills. The course stresses vocabulary building within the context of oral proficiency.

SP 222 CONVERSATION IV 2c-0l-2sh
This course continues the development of oral communication skills. Contemporary written and audio-visual media provide both models and contexts for discussions designed to provide practice in using the language in a variety of situations. The focus continues to be on increasing the students' level of oral proficiency.

SP 251 SPANISH III 3c-0l-3sh
Focus on listening, speaking, reading, and writing; review of grammar. Students will learn to function in everyday situations such as shopping, going to the bank, post office, and doctor's office; expressing opinions and doubts; and narrating and describing in past and future time.

SP 252 SPANISH IV 3c-0l-3sh
A continuation of SP 251. Students will learn to hypothesize and express past possibility and present/past probability. More focus on reading, writing, and exposure to cultural concepts.

SP 251-2 ACCELERATED SPANISH III AND IV 6c-0l-6sh
By attending class 6 hours each week, the student completes the intermediate sequence (6 credits) in one semester. The accelerated sections continue to develop basic language skills with a slightly greater emphasis upon the mastery of the spoken language. Majors take 221-222 concurrently.

SP 253 INTERMEDIATE COMPOSITION AND CONVERSATION 3c-0l-3sh
Intermediate course in grammar, reading, composition, and some oral work. Can substitute for or be in addition to SP252 for majors or serious students.

SP 254 COMMERCIAL SPANISH 3c-0l-3sh
Prerequisite: SP 252 or equivalent
Commercial letter writing, use of technical language, survey of special business practices, and methods of Spanish-speaking commercial systems and problems of translation are studied.

SP 321 ADVANCED CONVERSATION I 1c-0l-1sh
Designed to increase speaking ability. The variety of content permits repetition of these relatively informal courses.

SP 322 ADVANCED CONVERSATION II 1c-0l-1sh
Continuation of the oral communication skills emphasized in SP 321.

SP 351 ADVANCED SPANISH LANGUAGE I 3c-0l-3sh
This course is designed to provide a thorough review of Spanish grammar with special focus on those points which present particular difficulty to the English-speaking student owing to the peculiar differences between English and Spanish grammatical structures and syntax. Practical application of grammar is achieved through drill and frequent student compositions in Spanish.

SP 352 ADVANCED SPANISH LANGUAGE II 3c-0l-3sh
Sequential to Spanish 351, this course continues the in-depth study of correct Spanish usage through grammatical analysis, written and oral exercises, and drills as well as series of graduated compositions on carefully chosen topics which involve description, narration, and dialogue.

SP 361 DEVELOPMENT OF SPANISH CULTURE AND LITERATURE I 3c-0l-3sh
This course is designed to give a general background of Spanish history, art, and social and political attitudes and a general survey of literature. The scope of the course spans the period from the Middle Ages (10th century) to the end of the Golden Ages of Spanish Literature (17th century).

SP 362 DEVELOPMENT OF SPANISH CULTURE AND LITERATURE II 3c-0l-3sh
This course is designed to give a general background of Spanish history, art, and social and political attitudes and a general survey of literature. The scope of the course spans the period from the advent of Neoclassicism in Spain (18th century) to present-day Spain.

SP 363 DEVELOPMENT OF SPANISH-AMERICAN CULTURE AND LITERATURE I 3c-0l-3sh
This course examines the historical and cultural aspects of the Spanish-American countries, reviews their contributions over the centuries, and analyzes the literary schools. The scope of this course spans the period from the pre-Columbian epoch to the Wars of Independence (beginning of the 19th century).

SP 364 DEVELOPMENT OF SPANISH-AMERICAN CULTURE AND LITERATURE II 3c-0l-3sh
This course examines the historical and cultural aspects of the Spanish-American countries, reviews their contributions over the centuries, and analyzes the literary schools. The scope of this course spans the period from the Modernism movement to the present.

SP 365 SPANISH LITERATURE BEFORE 1650 3c-0l-3sh
This course will give a general view of the early Literature of Spain up to the Golden Era with emphasis in the major authors of the epoch.

SP 367 NINETEENTH-CENTURY SPANISH LITERATURE 3c-0l-3sh
A general study of the 19th-century Spanish literature from Romanticism to Realism. Poetry, novels, and theater will be presented to acquaint students with some literary techniques.

SP 368 TWENTIETH-CENTURY SPANISH LITERATURE 3c-0l-3sh
Presents a general survey of this particular century
Literature with due consideration to social factors and events behind them. The Generation of '98, the Generation of '27, Post- Civil War literature, and today's movements will be studied.

SP 370 GOLDEN AGE DRAMA 3c-0l-3sh
Traces the development of Spanish theater and examines its artistic and spiritual flowering in the Baroque period.

SP 371 THE SPANISH NOVEL 3c-0l-3sh
After a brief survey of origins and trends of the Spanish novel, major stress is given to the 19th-century novel and the Generation of '98.

SP 376 SPANISH-AMERICAN LITERATURE 3c-0l-3sh
Following a consideration of the salient tendencies of Spanish-American literature, this course may take the form of a comprehensive survey, or it may concentrate its attention upon the novel of social thesis.

SP 389 PENNSYLVANIA-VALLADOLID PROGRAM var-21sh
Contact chairperson, Department of Spanish and Classical Languages.

SP 390 SPANISH IN THE ELEMENTARY SCHOOL 3c-0l-3sh
Prerequisite: Spanish 252 or equivalent
The prospective teacher of Spanish on the elementary level is introduced to materials suitable for Grades 1 through 6. Preparation of games, songs, poems, and story telling included.

SP 402 TRANSLATION AND INTERPRETATION 3c-0l-3sh
Fundamental translation skills for use in business and industry as well as in academic and popular fields.

SP 480 MEXICO SUMMER PROGRAM var-3-6sh
Contact chairperson, Department of Spanish and Classical Languages.

SP 481 SPECIAL TOPICS 3c-0l-3sh
Designed to meet special needs of a student group, mainly related to Spanish-American literature.

SP 482 INDEPENDENT STUDY var-1 to 6sh
An opportunity to engage in an in-depth analysis of some topic dealing with the Spanish language and culture through consultation with a faculty member. Permission required.

SP 493 INTERNSHIP var-3 to 12sh
Prerequisite: One semester of study in a Spanish-speaking country
A supervised field experience in Spain or Mexico with approved public agencies and institutions or private firms; no longer than one semester and no less than one month. Positions will be matched as closely as possible with the intern's personal interests and professional goals. For more information, contact the director, Foreign Language and Internship Abroad Programs.

SS: SOCIAL SCIENCES

Department of History
College of Humanities and Social Sciences

SS 101 CONTEMPORARY SOCIAL SCIENCE 3c-0l-3sh
An interdisciplinary study of a current social topic that uses a team teaching approach. Topics may vary from semester to semester. The course is one option in the Social Science General Education Program.

SS 398 SOCIAL SCIENCE FOREIGN STUDY var2-6sh
Directed foreign study, emphasizing historical, political, economic, social, and geographical aspects of the area. Background reading, lectures, and briefings, diary or evaluative paper. Course credit may be applied as General Education or elective credit. (For details see Center for International Studies.)

SW: SOCIAL WORK

Department of Sociology/Anthropology
College of Humanities and Social Sciences

SW 238 INTRODUCTION TO SOCIAL WORK 3c-0l-3sh
Prerequisite: SO 151 or AN 110
Introduction to the dynamics of helping relationships.

SW 346 SOCIAL WELFARE POLICIES 3c-0l-3sh
Prerequisites: SO 151 or AN 110
Examination of the historical development of social welfare policies in Western society.

SW 407 HUMAN SERVICES MANAGEMENT 3c-0l-3sh
Prerequisite: AN110 or SO151
Treats social agencies as social systems. Focuses on interpersonal and intergroup relationships, communication, decision making, and policy formulation, and administrative implications of training, supervision, fund raising, consultation, budgeting, and research.

TH: THEATER

Department of Theater
College of Fine Arts

TH 101 INTRODUCTION TO THEATER 3c-0l-3sh
An exploration of various theater arts, examining major periods of theater history, selected works of dramatic literature, and essential theater arts of acting, directing, design, and technical theater. The goal is to make more understanding and appreciative audiences of students enrolled.

TH 110 SCRIPT ANALYSIS 3c-0l-3sh
Course examines major as well as alternative systems by which dramatic texts may be analyzed, including classical plot construction, scene structure, tension and release, dramatic rhythms, and several contemporary and less conventional methods of dramatic orchestration.

TH 115 PRINCIPLES OF THEATRE DESIGN AND ARCHITECTURE
Surveys principle architectural forms, style, and periods providing a visual history of theatrical architecture and scenic design. Basic design principles will also be incorporated.

TH 120 STAGECRAFT I 3c-0l-3sh
Exploration of the material, methods, and procedures utilized in creating a scenic environment. Through instruction and practical application, students learn the basis of scenic instruction and develop competency with the basic materials and equipment used in a theatrical scene shop.

TH 122 COSTUME WORKSHOP 3c-0l-3sh
Instruction and practical experience in the process of building costumes for the stage. Activities include fitting, cutting, sewing, dyeing, and painting. There is also instruction in the maintenance of wardrobe, costume stock, materials, and properties.

TH 130 STAGE VOICE I 3c-0l-3sh
Instruction in basic development of the vocal instrument of the actor in performance. Emphasis is placed upon the resonance, quality, pitch, and projection of the voice while perfecting the student's ability to articulate.

TH 131 STAGE MOVEMENT I 3c-0l-3sh
Instruction in basic stage movement and the physicalization of character. Includes work in character development through variety in movement, basic commedia technique, and the assessment, awareness, and correction of individual movement problems.

TH 201 THEATER HISTORY I 3c-0l-3sh
A comprehensive survey of the history, trends, and developments of theatre and drama from their beginnings through the English Renaissance.

TH 202 THEATER HISTORY II 3c-0l-3sh
Comprehensive survey of the history, trends, and developments of theatre and drama from the English Restoration to the present.

TH 220 STAGECRAFT II 3c-0l-3sh
Prerequisite: TH 120 or permission
Advanced exploration of materials, methods, and procedures involved in creating scenic environment. Students also receive intensive practical experience in shop planning and supervision to include problem-solving techniques.

TH 221 BASIC STAGE LIGHTING 3c-0l-3sh
Prerequisite: TH 120
Introduction to lighting instruments, color media, control boards, physical laws of electricity and optics, graphics, and conventional techniques used in lighting theatrical productions.

TH 223 MAKE-UP FOR THE STAGE 3c-0l-3sh
Deals with practical application of straight and character make-up and may include instruction in creating beards, wigs, prosthetics, and masks.

TH 240 ACTING I 3c-0l-3sh
Study of the primary elements of the Stanislavski system of character development. Includes text analysis and the development of physical action through a character's subtext, as well as motivational and improvisational techniques.

TH 301 TRAGIC MASK 3c-0l-3sh
This course is an historical survey of theatrical conventions, traditions, and production practices specifically associated with tragedy and its ensuing forms, drama, and melodrama. It focuses on landmark dramatic texts, examining the changing faces of tragic masks and their implications for theatrical practice from ancient Greece to the 20th Century.

TH 302 COMIC MASK 3c-0l-3sh
This course is an historical survey of theatrical conventions, traditions, and production practices specifically associated with comedy and its related forms, farce, burlesque, etc. It focuses on landmark dramatic texts, examining the changing faces of comic masks and their conventions and their implications for theatrical practice from ancient Greece to the 20th Century.

TH 310 THEATER CRITICISM 3c-0l-3sh
A study of the theory and criticism and of the discrete functions of critic and reviewer. Students see live performances and practice writing both reviews and criticism.

TH 320 SCENE DESIGN 3c-0l-3sh
Prerequisite: TH120
An introduction to the principles of scenic composition, analysis, concept development, and graphic communication methods used by the scenographer.

TH 321 STAGE LIGHTING DESIGN 3c-0l-3sh
Prerequisite: TH221
Covers the design and execution of stage lighting with emphasis on script analysis, the collaborative role of the lighting designer, lighting theory, and modern stage lighting practices. Practical applications include the conceptualization and designing of production lighting for Proscenium, Thrust, and Arena stages through class exercises.

TH 322 COSTUME DESIGN 3c-0l-3sh
Covers design and execution of stage costumes with emphasis on showing how mood and illusion can be created through the proper selection of style, color, and texture, supplemented by an overview of stage costuming.

TH 330 STAGE VOICE II 3c-0l-3sh
Prerequisite: TH130
Advanced voice training for the actor with particular emphasis on stage dialects and verse drama.

TH 331 STAGE MOVEMENT II
Prerequisite: TH131
Instruction in advanced physicalization of character and specialized stage movement. Included will be advanced work in character development through movement, group movement, stage combat, physical comedy, and introductory mime and/or mask training.

TH 340 ACTING II 3c-0l-3sh
Prerequisite: TH240, 131, 130
Study and practice of acting skills with special emphasis on style and period.

TH 350 DIRECTING 3c-0l-3sh
Prerequisites: TH110, TH240, permission
Introduction to basic directing skills: casting, floor plans, blocking, rehearsal procedures, and the applications of scene and character analysis. Students will prepare short scenes for class presentation.

TH 481 SPECIAL TOPICS var-1 to 6sh

TH 482 INDEPENDENT STUDY var-1 to 6sh
Prerequisite: Permission
Independent study in theater may be either purely academic or may be a practical production project, supported by a written document giving evidence of significant scholarly investigation or original, creative effort. May be repeated for a maximum of 6 credits.

TH 483 ACTING STUDIO 3c-2l-3sh
Prerequisite: TH 330
Repeatable studio course offering scene practice with faculty direction, coaching, and criticism. Specific type of scene work varies from semester to semester. May be repeated.

TH 484 DIRECTING STUDIO 3c-2l-3sh
Prerequisite: TH 330
Opportunity for students to direct scene work, one-act plays, or larger projects, according to individual levels of experience, preparation, and readiness. Practical application of principles of directing to specific problems in directing. Student projects performed in public, open-class recitals. May be repeated.

TH 486 PRACTICUM IN PRODUCTION var-1 to 4sh
Prerequisite: Permission
An opportunity with academic credit for students to make significant contributions to campus productions augmenting theater course work in the areas of assistant directing or directing, stage management, technical direction, sound design, lighting, costuming, scene design, properties and set decoration, scene building and painting, and make-up design. May be repeated.

TH 489 TECHNICAL THEATER PROBLEMS 3c-0l-3sh
Prerequisite: Permission of instructor
Open to all students desiring instruction in a variety of technical theater areas not presently covered in other courses. Topics to include sound design, stage management, set props, media make-up, technical drawing/mixed media, and scene painting. May be repeated.

TH 493 INTERNSHIP var-3 to 12sh

VO: VOCATIONAL EDUCATION

Center for Vocational-Technical Personnel Preparation
College of Education

VO 010 INDUSTRIAL ELECTRICAL TECHNOLOGY var-1-18sh
Prerequisite: Center/Department Permission/Institutional Credit
Emphasis on comprehensive industrial electrical technology through training in specialty concentrations applied to design, development, and testing of electrical circuits, devices and systems for generating electricity, and the distribution and utilization of electrical power.

VO 100 PREPARATION OF THE VOCATIONAL PROFESSIONAL I var-15sh
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected pedagogical competencies. Individualized instruction is supplemented with monthly seminars. Self-evaluation is encouraged in the program, utilizing videotape equipment and the feedback from a team of professional teacher educators.

VO 400 PREPARATION OF THE VOCATIONAL PROFESSIONAL II var-15sh
Prerequisite: Successful completion of VO 100
Personalized, self-paced vocational teacher preparation. The vocational student/intern develops, demonstrates, and documents competence in selected teaching skills in the areas of program planning, program development, program evaluation, and managing and evaluating instruction in a vocational school setting. Self-evaluation is encouraged in the program utilizing videotape equipment and the feedback from a team of professional teacher educators.

VO 401 SPECIAL TOPICS IN VOCATIONAL TECHNICAL PREPARATION var 12sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional technical skills in areas related to their occupational competence under professional supervision. Topics are determined through individual counseling, through priority needs identified by advisory committees, and through evaluation of technical competence by center teaching staff.

VO 402 SPECIAL TOPICS IN VOCATIONAL PEDAGOGICAL PREPARATION var 15sh
Prerequisite: Center permission
Provides opportunities for vocational students/interns to develop additional teaching skills under professional supervision. Topics are determined through identification of priority areas in vocational education using national and state surveys.

VO 450 TECHNICAL PREPARATION OF THE VOCATIONAL PROFESSIONAL var-24sh
Competency assessment of occupational experience through national standardized written and performance examinations.

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DIANA BRANDI ..... Program Facilitator

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JAMES SADLER ..... Director, CPR and Rescue Training
MICHELE BELAK ..... Director, Emergency Medical Services
GARY FULTON ..... Director, Emergency Services Training
SANDRA TOMLINSON ..... Director, Indiana County Seat Belt Program
JEANNIE BUSBY ..... Coordinator, Pennsylvania Volunteers for Highway Safety

Pennsylvania Motorcycle Safety Program
ALLEN ROBINSON ..... Project Director
THEODORE UNLAND ..... Assistant Coordinator
ROBERTA CARLSON ..... Central Regional Coordinator
WILLIAM STAUFFER ..... Western Regional Coordinator
JACK ZIMMER ..... Eastern Regional Coordinator
STEVE MURPHY ..... Program Assistant

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